

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 642.—Vol. XVII.

LONDON, SATURDAY, DECEMBER 11, 1847.

[Price 6d.]

Stannaries of Cornwall.—In the Vice-Warden's Court.

KNIGHT & WYLD.

WHEREAS, the VICE-WARDEN did, by an Order, or Decree, made in the above-mentioned cause, and bearing date the 15th day of November last, ORDER and DECREE that a SALE be made of the PARTS, or SHARES, and INTEREST of the said defendant in WHEAL BUCKETS MINE, in the parish of REDRUTH, within the said Stannaries, under the direction of the Registrar of this Court; and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the said Order, or Decree.

Notice is hereby given, that, pursuant to the said Decree, a PUBLIC AUCTION will be HELD at Pearce's Royal Hotel, Truro, on Wednesday, the 15th day of December instant, at Four o'clock in the afternoon, for SELLING in such lots as shall be then and there determined on, NINE (266) PARTS, or SHARES, of and in the said mine, and the like parts, or shares, of and in the ORES, HALVANS, MACHINERY, and MATERIALS, and other EFFECTS upon, and belonging to, the said mine.

For further information, application may be made to Mr. H. S. Stokes, solicitor, Truro. Dated Registrar's Office, Dec. 1st, 1847.

Stannaries of Cornwall.—In the Vice-Warden's Court.

TIPPET & BENNETT.

WHEREAS, the VICE-WARDEN did, by an Order, or Decree, made in the above-mentioned cause, and bearing date the Thirtieth day of November last, ORDER and DECREE that a SALE be made of the PARTS, or SHARES, and INTEREST of the said defendant in WHEAL HENRY MINE, in the parish of KENYON, within the said Stannaries, under the direction of the Registrar of this Court; and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the said Order, or Decree. Notice is hereby given, that, pursuant to the said Decree, a PUBLIC AUCTION will be held at Pearce's Royal Hotel, Truro, on Wednesday, the Fifteenth day of December instant, at Three o'clock in the afternoon, for SELLING, in such lots as shall be then and there determined on, ONE (1000) PART, or SHARE, of and in the said mine, and the like Part, or Share, of and in the ORES, HALVANS, MACHINERY, and other EFFECTS, upon and belonging to the said mine.

For further information, application may be made to Mr. H. S. Stokes, solicitor, Truro. Dated Registrar's Office, Truro, December 1, 1847.

TO CAPITALISTS AND MINING ADVENTURERS.

TO BE DISPOSED OF, the UNEXPIRED TERM of a LEASE, for 999 years, of a valuable MINE, on the north side of this island, situate at THOMASFIELD, in the parish of METCALFE, with numerous LODES and VEINS of rich COPPER and SILVER-LEAD ORE, with other valuable MINERALS, specimens of which may be seen, and information obtained, on application to the undersigned.

This mine, situate in a mining district, has been inspected by competent judges, and approved of—only requiring a visit thereto, to satisfy any one of the valuable indications throughout the extensive property, increasing as the same have been operated upon, and many lodes proved, in various parts of the property, with abundant water-power, confining the most economical that it only requires a comparatively moderate outlay, combined with energy and science, to change the face of that part of the country; being also but a short distance from the "Barquedier," and nearly level thereto, with timber in abundance. A tramway may be laid down at a moderate expense.

This mine may, with confidence, be recommended to capitalists and adventurers, as worthy of their early attention, and to a party disposed to work the same energetically, one-half the amount would be taken in shares, on a fair sum being obtained. Please apply (if by letter, pre-paid) to E. C. LEWIS, general broker and agent. General Agency Office, Kingston, Jamaica, 1847.

SUPERIOR STEAM-ENGINE.—TO BE SOLD, a STEAM-

ENGINE, of 50-horse cylinder, single-acting, with 11-ton boiler, condensing apparatus, spring beams, and first place of rod—now at WHEAL GILL, near LISKEARD, Cornwall, where it was erected new in 1845, of stout material, and on the latest and most improved principle; is perfect, and can be confidently recommended as of first-rate quality and power.—Also, a 35-hp. lift of 12-inch PUMPS, with plunger-pole, case, &c., complete, nearly new; 11-inch working barrel, windbore, doopceps, &c., in good condition, having been but a short time out of use.

Tenders for which, stating the gross sum for the engine, &c., and per cent. for the plunger-pole, working barrel, &c., will be received by Mr. R. Taylor, the purchaser, on the mine, on or before the 20th inst., to whom application to view may be made. Approved bills, at two months, will be taken in payment. Wheel Gill, Dec. 1, 1847.

VALUABLE PUMPING AND WINDING ENGINES FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, at WHEAL VOR MINE, in the parish of BREAGE, CORNWALL.—

- 1 60-inch DRAUGHT ENGINE, 16-foot stroke in cylinder, and 8 feet in shaft, main beam and cap, top nozzle, spring piston and rod—all new this year; with four boilers, of 12 tons each, in excellent repair.
- 1 80-inch DITTO, 10 feet stroke in cylinder, 7 1/2 feet in shaft, cylinder, piston, bottom and cover, nearly new, with two boilers, of 12 tons each, and three boilers, of 10 tons each, all lately thoroughly repaired.
- 1 45-inch DITTO, 9 feet stroke in cylinder, and 7 feet in shaft, without boilers.
- 1 30-inch WINDING ENGINE, 6 feet stroke, with two boilers, of 4 and 6 tons, and vertical cage, all in complete repair—the boilers and some other parts nearly new.
- 1 18-inch DITTO, 4 ft. stroke, with one boiler, of 5 tons, and horizontal cage, complete. Several TONS of straight and turned STEAM-PIPES.
- 1 12-head CAST-IRON STAMPS AXLES, with bearings, oak frames, &c., complete. A powerful WEIGHTING MACHINE, nearly new, comprising every requisite. An immense number of PUMPS, matching-pieces and windbores, 12 to 17-inch bore, with working barrels, doopceps, H-pieces, cases, with stuffing-boxes and glands to match, from 11 to 19 inches bore, and plunger-poles, from 12 to 19 diameter. Faggoted rod and cap plates, 6, 7, and 8 inches wide, staples and glands, eyerunners, caps, saddles, troughs and endons for balance and other bobs.

Application to be made to Capt. R. Blight, Jan., on the mine. Dated Nov. 29, 1847.

VALUABLE COAL MINES FOR SALE, in the county of

DURHAM, situate 3 miles south-east of the city, adjacent to the York and Newcastle and Hartlepool and Clarence Railways. ONE COLLIERY, comprising about 560 acres, is in FULL OPERATION, producing between 7 and 8 keels of the best coal per day, which are chiefly sold upon the London market; and there are coke ovens plant, coal waggon, and every requisite for more extended working, with 60 acres of land, let at a fair rent. The other colliery adjoining, comprises 1500 acres, with a shaft sunk to the five-quarter seam, of first-rate quality of coal, and a limestone quarry. The collieries will be sold together or separately, as also houses for the managers and workmen, upon reasonable terms.—For further particulars, apply to Messrs. Hopwood and Son, solicitors, 47, Chancery-lane, or Messrs. Dale, solicitors, North Shields; or James John Esq., Newcastle-upon-Tyne.

YRSHIRE.—TO BE LET, the COAL, IRONSTONE, and

FIRE-CLAY, in the ESTATE of WATERHEAD, lying in the parish of NEW CUMNOCK, the property of Sir John Cathcart, Bart. This estate is in the vicinity of the Niddale Iron-Works, now being erected, on the one side, and of the Dalmellington Iron-Works, on the other; and it is believed the BLACK-BAND IRONSTONE, which is found in the estates of the Marquis of Bute, Craigavon and Afton, adjoining, passes under about 1500 acres of Waterhead lands. There are also CLAY-BAND IRONSTONE and LIMESTONE in the property, and SMITHY COAL is now working within it. The Glasgow and Carlisle Railway, now in course of being made, passes within 3 miles of the lands. There are various FIELDS of MINERALS in ESTATES adjoining, and in the near neighbourhood, now TO BE LET, so that any company, of skill and capital, would have ample scope for establishing iron-works on a large scale.

A plan of the estate, and general section of the minerals, with samples of the ironstone, will be seen on application to John Geddes, Esq., mining engineer, No. 49, Albany street, Edinburgh; Arthur Campbell, W.S., No. 22, Dublin-street, Edinburgh; or Mr. Kennedy Brown, writer, Glasgow—either of whom will receive offers for a lease. Wm. Gemmell, residing at Melkhill, on the estate, will point out the boundaries of it.

CARMARTHENSHIRE.—TO BE LET, OR SOLD, several

SEAMS of ANTHRACITE COAL and IRONSTONE, lying under the FARMS of CILFREY, NEW INN, FOY, and ROSEFACH, situate in the parishes of LLANELLY and LLANGENDRINE, in the said county. If required, the SURFACE also will be DISPOSED OF.—The above property is within a short distance of the Kidwelly Canal, and distant from Pembrey Floating Harbour 8 miles, where the present demand for coal exceeds the supply.

Further particulars can be obtained on application to Dr. Lawrence, Carmarthen; or to Mr. John Griffiths, Aberystwyth, near Carmarthen. Carmarthen, Nov. 29, 1847.

COLLIERY TO LET, IN SOUTH WALES.—A compact

COLLIERY TO BE LET, with immediate possession, situate within three miles of the harbour and floating dock at Llanelly, with which it is connected by a public and private railroad from the pit's mouth, intersecting the line of the South Wales Railway, which also passes about a quarter of a mile from the pit. The Spilly Copper-Works, adjoining the pit, at a distance of a few fields length, have been very recently taken by a new company, who are just now commencing operations there. Easy access to these works may be had from the pit, entirely over the land of the owner of the colliery.

There are two engines, one of about 40, and the other 10-horse power, for pumping and lifting. The shaft, in depth, is about 40 fathoms, passing through two veins of coal—one of which has been partially worked, for the purpose of proving the qualities of the coal, which is in high repute, as being excellent for copper-works, steam, smiths, and other purposes. Another (third) vein of coal has been proved, by boring about 18 fms. deeper than the present pit; and there are other veins to be had, at a still greater depth. The engines, plant, &c., to be taken at a given sum, or by valuation, as may be agreed upon.—For further particulars, apply (by letter, pre-paid) to Benjamin Jones, Esq., solicitor, Llanelly, Carmarthenshire.

PENINSULAR AND ORIENTAL STEAM NAVIGATION

COMPANY.—At a Meeting of the proprietors of this company, held at their offices, 51, St. Mary Axe, on the 6th inst., pursuant to notice, it was unanimously resolved—
1. That the report, now read, be adopted and circulated amongst the proprietors.
2. That Sir John Pirie, Bart., and Capt. R. Bourne, R.N., be re-elected directors of this company, and that the Hon. J. T. Leslie Melville, and Jameson Hunter, Esq., be re-elected the auditors of the company, for the ensuing two years, in conformity with the provisions of the Deed of Settlement.
3. That a dividend of 4 per cent., recommended in the report now read, be payable on or after the 23d December, 1847, between the hours of Twelve and Three o'clock on each day, to such proprietors as are duly qualified to receive the same.
4. That, in the opinion of this meeting, the late deputy-chairman, Sir John Campbell, the board, and managing directors, are entitled to the undiminished confidence of the proprietors, and that the cordial thanks of this meeting be offered to them, for the zeal and ability exhibited in conducting the affairs of the company.

ASSAYING AND ANALYSIS.—MR. MITCHELL begs to

inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTURERS, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY, 23, HAWLEY-ROAD, KENTISH TOWN, LONDON, to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ADCOCK'S PATENT SPRAY PUMP.—This important

INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantrannau Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 187, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the Mining Journal, 55, Fleet-street; and through any respectable bookseller—price 2s.

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDIENT MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this." Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cornhill, Cornwall.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, DOCKLANDS. ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only 40 per cent. instead of 200, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION

COMPANIES, MANUFACTURERS, AND ENGINEERS. W. BROTHERTON AND CO.'S PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in Her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers. Further particulars can be had, as testimonials, upon application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London. N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,

RAILWAY CRANES, FIRE-ENGINES, GAS, &c. PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c. VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK, Goswell Mews, Goswell-road, London.

VIADUCTS AND OTHER RAILWAY WORK.—The at-

tention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSSEL ASPHALTE, as the only imperishable and permanent covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one. I. FARRELL, Secretary, Seyssels Asphalt Company, Stangate, London.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN,

J. MURDOCH (successor and late assistant to Mr. Hebert) informs INVENTORS and PATENTERS, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, (THE ONLY ONE EXISTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense; and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED. SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms. FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, STRAND, LONDON. INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPBELL and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen. Application personally, or by letter, to F. W. Campbell and Co., No. 210, Strand (corner of Essex-street).

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 23, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, as secured by three separate patents, respectively granted in 1836, 1840, 1843. Silver lever watches, jewelled in four holes, 6 g. each; in gold cases, from 28 to 410 extra. Gold horizontal watches, with gold dial, from 5 g. to 12 g. each. DENT'S PATENT DIAPHRAGM, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use is, each, but to customers gratis.

THE PERRAN CHERRYBEAM: price 1s., or per post on

receipt of 10 postage stamps—a COMIC CORNISH POEM. By J. T. TREGELLAS.

LONDON: Cox and Son, King William-street.—TRURO: J. R. Netherton. N.B.—The unavoidable delay which has occurred in the delivery of this book is obviated, and any quantity may now be had on application as above.

INFLUENZA, COUGHS, COLDS, &c.—This week, upwards

of 80 testimonials have been received of the efficacy of Dr. LOCOCK'S PULMONIC WATERS.—From Mr. James Drury, Medicine Warehouse, 224, Stone-bow, Lincoln:—"Gentlemen, I am authorised by several ladies and gentlemen (whose names I can give, if required) to state, that Dr. Locock's Waters have proved of the highest efficacy to them for colds, coughs, hoarseness, whooping influenza, sore throat; and in almost every case I hear of benevolence by their use, &c. (Signed).—Jas. Drury." Dr. Locock's Waters give instant relief, and a rapid cure of asthma, coughs, and all disorders of the breath and lungs. To singers and public speakers they are invaluable for clearing and strengthening the voice—they have a pleasant taste.—Price 1s. 1d., 2s. 6d., and 11s. per box.—Agents: De Silva and Co., 1, Bride-lane, London; sold by all medicine vendors.

TO IRONMASTERS AND MANUFACTURERS.—An

AGENT, of respectability and long standing in London, is OPEN for AGENCIES for the SALE of BARS, RODS, SHEETS, and HOOPS, and TIN-PLATES. The Advertiser has an office in the City, and is well acquainted with buyers.—Address "R. W. Messrs. Knight and Foster, stationers, Eastcheap, London."

TO RAILWAY CONTRACTORS, COLLIERY OWNERS,

IRON MERCHANTS, AND OTHERS.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, TWO or THREE HUNDRED TONS of CONTRACTORS' RAIL, viz. 48 lbs. per yard—in lengths of 12, 15, and 16 ft.—the same having been but a short time in use; are in good order, and may be purchased at a moderate rate.—Apply to John Stephenson and Co., Railway Contractors' Office, Stirling.—Dec. 6, 1847.

CHINA CLAY WANTED, FOR EXPORTATION.—

Samples of the best qualities, with prices, free on board at a shipping port, to be sent, post free, to Mr. G. Dressler, 6, Idol-lane, City.

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—

For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES

ALWAYS IN STOCK. Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM. Price—£12 to £16; with boiler, £22 per horse.

WANTED—A CORNISH PUMPING-ENGINE, either

NEW or SECOND-HAND, in good condition; with cylinder, from 80 to 90 inches diameter; likewise, about TWO HUNDRED and FIFTY YARDS of PUMPS, 18 to 22 inches diameter.—Address, stating particulars, Mr. John Lancaster, Mostyn Colliery, near Holywell.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS,

LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MR. R. TREDINNICK, THREE KING'S COURT,

LOMBARD-STREET, LONDON. Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

JAMES LANE, MINING SHARE DEALER,

75, OLD BROAD-STREET, LONDON.

BRITISH MINING OFFICES, No. 12, HAYMARKET,

And No. 41, MOORGATE-STREET, LONDON. And No. 4, STAMP-OFFICE BUILDINGS, MANCHESTER. At either of which places PROSPECTUSES and SHARES in the various SILVER-LEAD and COPPER MINES connected with these offices, may be obtained. T. H. TALUNTON, London. W. SHEARMAN, Manchester.

MONEY.—MESSRS. KILLICK & CO. (late WINSTANLEY,

KILLICK, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged. 6, Bank Chambers, opposite the Bank of England.

CRAIG-DDU SLATE COMPANY, FESTINOG, MERIO-

NETHSHIRE, NORTH WALES.—This company is now COMPLETELY REGISTERED, and the FIRST CALL of ONE POUND per share paid-up. The men are now making slate with Nos. 1 and 2 bargains. The slate proves to be of superior quality. No. 3 bargain is progressing satisfactorily in the clearing, and there are several cargoes of slates and slabs on the wharf bespoke.—Dec. 9, 1847.

COOMBE VALE CONSOLS MINE.—At the adjourned

Meeting of the shareholders in the above mine, held at the King's Arms Inn, Llanconast, on Monday, the 29th Nov., 1847, it was resolved:—That those parties who are in arrears be immediately sued, and be compelled to pay up their amount of calls.

That Messrs. Richard and John Doidge be allowed until the 20th Dec. next to dispose of the mine; and that, in so doing, they take all the materials in the mine, subject to a price to be paid for the same, according to the valuation of two referees—one to be chosen by Messrs. Doidge, and the other by the company, or by an umpire to be chosen by such referees; and in case either the said Messrs. Doidge, on their part, or the said company, on their part, shall, after six days' notice from the other of the said parties, refuse or neglect to appoint a referee, then the referee of the party giving such notice shall alone fix the price to be paid or received (as the case may be) for the said materials.

I beg to add, that any of the present adventurers, who may desire to continue or enlarge their interest in the mine, and to reconstruct a company for carrying on its operations, will have every facility for so doing. JOHN T. PEARSE, Furer, Llanconast, Nov. 30, 1847.

MERIONETHSHIRE SLATE & SLATE SLAB COMPANY.

—Notice is hereby given, that all SHARES in this company, upon which the CALL of 10s. per share, made on the 4th day of April last, be NOT PAID into the Commercial Bank of London, Louthbury, on or before the 13th day of December next, will be considered FORFEITED, and disposed of pursuant to the terms of the Deed of Settlement. 5, Walbrook, London, Nov. 30, 1847. W. WEST, Manager.

MERIONETHSHIRE SLATE & SLATE SLAB COMPANY.

—Notice is hereby given, that the TIME for PAYMENT of the CALL, made on the 13th of July last, is EXTENDED, and that the same must be PAID into the Commercial Bank of London, Louthbury, on or before the 1st day of January next; or, in default thereof, the shares are liable to forfeiture, pursuant to the provisions contained in the Deed of Settlement. 5, Walbrook, London, Nov. 30, 1847. W. WEST, Manager.

RHYMNEY IRON COMPANY.—The directors give Notice

to the holders of 415 share scrip certificates of this company, that the THIRD and LAST INSTALLMENT of TWO POUNDS per share is hereby CALLED FOR, and PAYABLE to Messrs. Glyn, Halifax, Mills, and Co., Lombard-street, on Thursday, the 30th January, 1848. THOS. WILSON, Chairman. Laurence Pountney-hill, Dec. 10, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—

The directors hereby give Notice, that a MEETING of the shareholders will be HELD at the office on Monday, the 3d of January next, at One o'clock precisely, when the accounts for three months, ending the 31st December, will be laid before them. 57, Old Broad-street, Dec. 10, 1847. WM. NICHOLSON, Secretary.

WHEAL TRESCOLL, OR THE MODEL MINE.—being

AN EXPERIMENT IN MINING, on an entirely new principle.—On January 1, 1848, will be ISSUED to the PUBLIC a PROSPECTUS, describing a PLAN of OPERATIONS, whereby MINING may be CONDUCTED and CARRIED OUT on as FAIR and LEGITIMATE a MANNER as any other branch of civil engineering. Any gentleman wishing to become a patron to the Reform Mining System, may have a private interview with one of the projectors, by calling at the office of Mr. C. S. Richardson, C.E., 5, Whitefriars-street, City.

STRONG MIXING PIG-IRON.—The YSTALFYFERA

IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as ascertained on by that great practical authority, the late David Moseley, Esq., M.A.C.E.

"It greatly exceeds, in strength, in ductility, and capacity to resist impact, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of great springiness, or elasticity, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a regularity of grain throughout, resembling the structure of unhardened steel."

Address THE YSTALFYFERA IRON COMPANY, Near NEATH, SOUTH WALES. Dated June 22, 1847.

HOT-BLAST WITHOUT COAL, LABOUR, on REPAIRS.

DIXON and BUDD'S PATENTS. Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath. Dated June 22, 1847.

put upon it. Parties choose rather to adapt what was found out to the more many make mistakes of the world—this retarded science. If this had been the case when it was discovered that a piece of amber, when subjected to friction, would attract a feather, we never should have had an electric telegraph. That we required amongst us institutions that would educate us in general observation, as well as in other points. The theatre of the institution, in which the address was delivered, was extremely well attended.

SOCIETY OF ARTS.

DECEMBER 1.—WILLIAM WYON, Esq., B.A., in the chair.

Five specimens of painting on glass, by M. De Ron, of Munich, were exhibited. The SECRETARY stated, that the colours used by M. De Ron are peculiar, and the method of preparing them known only to himself. The colours used are of various degrees of hardness, care being taken, in using them, never to put a harder upon a softer metal. Also, he uses both sides of the glass—this enables him to obtain clearness and decision of colour.—MR. HALL offered some remarks on the history and manufacture of stained glass, and exhibited several specimens of modern manufacture.

MR. B. MOUTON exhibited a model of an iron truss railway bridge, the invention of Mr. Rider, of New York. The peculiarities of this bridge are, its simplicity, lightness, and strength. Mr. Mouton stated, that the directors of the New York and Harlem railroad have erected a bridge on this principle, the span of it being 70 feet, and having a double track, or roadway, upon it; and the whole weight of metal used in its construction weighs only 13 tons, while the cost was under \$300. [A notice of Mr. Mouton's bridge appeared in the *Mining Journal* of the 6th November.]

A paper was read by Mr. ANCHER, on Engraving, with reference to monumental brasses and incised stones. The author commenced, by referring to the very early period at which the art of engraving appears to have been known and practised by the lapidary and goldsmith, and the probability that those to whom the art was known, were subject to a precise code of laws, and connected with the priestly office, these laws having the effect of regulating the productions according to a given standard, set up by the heads of their order—thus giving a singular uniformity to the numerous examples of antique art, whether in painting, sculpture, or engraving. After alluding to the Egyptian, Etruscan, Greek, and Roman specimens of engraving, and similarity and common origin, he proceeded to point out the various purposes to which the art of engraving on brass was employed—such as the representation of geographical diagrams. In the time of Herodotus, edicts and public records were sometimes inscribed on brass tablets, a striking instance of which occurs in the preservation, down to the present time, of the will and acts of the Emperor Augustus. Having touched upon some few instances of the ancient practice of the cartographic art, the author proceeded to detail some particulars of the process, as it appeared at the general revival of art during the middle ages. In the eighth century, by a law of Kenneth, king of Scotland, it was enjoined, that a cross should be put on every grave-stone (i.e. coffin-lid); and this appears to have been done in three ways—1st, by the use of incised lines drawn round the object; 2d, by producing the form in low relief; and, 3d, by a wholly excised figure. The use of sepulchral crosses appears to have originated with the general revival of art in the 13th century. One of the earliest specimens, is that of Sir Roger de Tronington, who died in 1299. The brasses of the 14th and 15th centuries contain, besides the effigies of warriors, churchmen, ladies, and civilians, many examples of beautiful decoration, derived from the architectural practice of the time, and different combinations of the letters I. H. S., composing the sacred monogram, appear in the brasses of the 15th and beginning of the 16th centuries. At the time of the reformation, these sacred monuments appear to have become obnoxious, and were, accordingly, swept out of the churches with an unsparring hand, few (comparatively) having escaped destruction; of some of these, however, the authorities produced rubbings; and, having traced the history down to the 19th century, and referred to the latest of that period (prior to those produced under his own direction), proceeded to urge the desirableness of preserving, as a nation, a complete collection of the rubbings of the crosses of this country, as illustrative of the costume and history of bygone times; and the propriety of such a collection being deposited in the British Museum. The author then concluded his paper, by calling attention to the cartoons of several monuments, recently executed by himself, by a new process of working in brass, and which he promised to communicate to the society at an early date. The discussion on this paper was postponed till the next meeting, and the SECRETARY announced, that additional specimens and rubbings would then be exhibited.

ON STEAM-BOAT EXPLOSIONS.

To the RT. HON. LORD DENMAN, Lord Chief Justice of Her Majesty's Court of Queen's Bench.

MR. LORD.—In continuing my remarks from my letter in last week's *Mining Journal*, I shall have to call to your lordship's notice some of the evidence, as adduced before the coroner's court—this I do for the purpose of showing how material it would have been for the interests of the prisoner that some individual in his behalf had been examined. The first witness I will introduce to the notice of your lordship is the discharged stoker, Edwards, considered by all a vindictive man—here is a witness, who, having been cognizant of the practices carried on in this vessel for months, made no remark—with the exception of the fact, that he was discharged, he was discharged—who, on his oath, deposed to having seen the mercury in the pressure gauge at times as high as 200 lbs.; the value to be placed on the testimony of such a witness will be self-evident when I assert that, from the time of this vessel's commencing running to the date of the accident, she had but one gauge, the one stated to have been destroyed at the time of the explosion, and that gauge only indicated to one hundred and forty, yet seen repeatedly by this witness at 200. (?) The evidence of Mr. Henry Grace is of value, as emanating from a surveyor, and one who practised his eye would have readily detected any deviation of the vessel's deck from a horizontal line, technically called "listing;" he stated, that he had been on board four or five minutes prior to the explosion—"When I went on board she was afloat and upright, she had arrived a few minutes before I embarked." The evidence of this gentleman must negative the idea, that the explosion was caused by the listing of the vessel, laying bare a certain portion of the tubes, which would then become overheated, and on the vessel's righting, on those tubes coming in contact with the water, steam being evolved more rapidly than the water (admitting them to have been perfect) could allow of its escape. The absorption of oxygen has long been a favorite theory; but, in the present case, even admitting it possible to cause an explosion, when this gas is present, which is exceedingly problematical, the presence of incrustation on the tubes is fatal to its admissibility; the same appearances also negative the spheroidal theory, one of much later origin.

There can, my lord, be in the present instance, I imagine, with all engineers who have examined this vessel, but on opinion, which is fortified in the evidence of the convicted man, Hoeseman, who stated that he tried the middle-gauge cocks about 11 min. prior to the accident, and water came from their full-bore—gauge cocks, though not an infallible guide, this may be relied on when the engines are not in action. Now, supposing him to have been in error, and that he tried the lowest gauge cocks, situated 7 in. above the tubes, we then should have over 200 gallons of water in the boilers above the tubes; and if we admit him correct in his statement, of its being level with the middle gauge cock—a supply of over 300 gallons, an amount impossible to have been evaporated by these two 16-horse power boilers in quadruple the time stated—viz. therefore, must come to the conclusion, that the explosion was produced simply by an excess of pressure far over that for which the boiler was constructed, such excess being caused, either by accident or design: that it was not caused by design, I think I can show to your lordship, through the evidence given by two witnesses, one of whom I introduce for the purpose of showing that the very fact which, in his opinion, enabled him to speak so positively in conjunction with the other witnesses, as to the non-escape of steam, was one of the facts relied upon by me to establish the engineer's innocence. It was stated, as follows, by Mr. Hamilton—"I had been on the pier five minutes previously observing the vessel; I am confident there was no blowing off, or escape of steam—the morning was particularly fine, and if there had been any escape of steam I must have seen it."

Now, my lord, it is a fact, and one well known to most engineers, that steam when discharging itself, as shown in my preceding letter (fig. 6), at the lower part of the funnel, and mixing with the products of combustion, is in certain states of the atmosphere almost invisible, and to the unpractised eye, entirely so. Steam issuing from a funnel, when the day is fine, and the atmosphere is saturated with moisture, is not visible on a dull damp day, or when the atmosphere is surcharged with moisture. The state of the atmosphere in London at the time of the explosion will be seen by the following passage from a letter, most liberally forwarded to me by the Astronomer Royal, in answer to an application for the state of the atmosphere at the time of the explosion:—"At 10 in the morning of the 27th of August (August 26, 22 h. astronomical reckoning), the barom. thermometer was at about 30.147, the thermometer 68.1, the dew point 68.7; the barometer and thermometer were a little higher than usual, and the air a very little drier than usual."—G. B. AIRY, Nov. 30, 1847.—Hence, therefore, was one great point in favour of the prisoner; and had the attention of the jury been directed to it, some of them possibly might have called to mind that the steam issuing from another high-pressure boat, the *Locomotive*, and that under circumstances not so favourable to its success, is, on days like the 27th August, when the fogs are clear, invisible. Had the valves been prevented from setting, as practised by this man's predecessors, the blast cock being shut off, the fires being good, we should have had no such effect as that sworn to by the witness Wheldon, who stated that he heard a hissing noise, and saw ashes coming out of the funnel. The hissing noise heard by this witness, I have no hesitation in stating, was the steam escaping from the larboard weighted valve, variable at its exit from the top of the funnel through existing causes, combined with the dryness of the atmosphere. Were further confirmation necessary, it is adduced by the concluding part of his evidence, and this, too, emanating from a man ignorant of mechanical subjects, who, therefore, could not have intentionally stated the fact, with a knowledge of its being convertible beneficially to the interests of Hoeseman—"I saw ashes coming out of the funnel." The boiler of the *Cricket*, it has been already shown, did not possess sufficient draught. A draught-cock was added; the fires being good, that the products of combustion were in its passage through the funnel, accompanied by the lighter portions of fuel—the ashes—a striking confirmation, that the draught was excessive at the period when least required. My lord, I hold it to be a point imperative on steam-boat manufacturers, that they place every requisite requisite for the safety of the public, and also of the engineer, on all vessels—more especially those on which high-pressure are employed—leave it out of the reach of probability, that an accidental derangement can take place; it then resolves itself, such precautions being employed into a *willful act*, and one that ought, in the opinion of your humble servant, rank next to murder in our criminal code. Public safety calls for such an enactment—common sense dictates its absolute necessity. If it had been intended, in the present instance, to work to only 40 to 45, why place a weight, that could accidentally shift to 66? If intended to work at its maximum to 80, by the Salter's spring balances, why place a screw to the Salter's balance, that could be accidentally screwed down to exert a pressure, at its maximum, of 170 lbs. to the square inch, one hundred and ten pounds above the pressure required, and over forty pounds above the supposed bursting pressure? Had the screw been provided with a stop, when screwed down to 35 or 40, it could not, by accident, have exerted a greater pressure; the screw ought to have been so constructed in this balance, that the nut, when screwed down to its utmost (23 in.), would go no further. It would then indicate 35 on the balance, and exert 70 on the boiler. But, as applied in this vessel, by screwing it down 11 in. lower from 45, where Skinner left it, it would then show 60, the pressure the man would naturally infer existing within the boiler, and one which he deemed safe; whilst the real pressure would be 130, or that at which rupture commenced in the unexploded boiler, when subjected to the hydraulic test. Why was this so, indicating only half the real pressure?—that it was so, no one can deny. Why it was so, is a point, with many others, that Mr. Joyce or his foreman ought to explain to the public. I shall now, my lord, bring this subject to a close, by showing, that the negligence of which your lordship charged the prisoner—not, however, intentionally—in omitting to "turn off the steam, on his arrival at the end of his journey," was a precaution which he could neither accidentally, or designedly omit—he had not the requisite means for so doing. In all the vessels belonging to public companies trading on the Thames, the engineer has at his command an auxiliary steam-pipe, which conveys the steam from the boiler under water. On the vessel stopping, this pipe is put in action by the engineer, or stoker, opening a cock (fig. 8). The valves are also out of the control of the engineer—he cannot exert, if he wished it, any extra pressure. The waste steam-pipes, leading from the valve boxes, are conveyed under water, and not into the funnel. The *Cricket* had no such precautions, neither have the *Ant* and the *Bea*.

In the case of the *Cricket*, to turn off the steam at the end of the voyage, the engineer

must remove the top of the steam casing; he must then unscrew the Salter's spring balances; and, finally, if both weighted levers be required to be lifted, cut away, by means of a hammer and chisel, the 14 angle iron, which supported the flat plate, forming a portion of the top of such steam casing—an operation that would occupy some minutes; whilst, if the vessel had been fitted, as others on the river, which are working to only one-fifth of the pressure exerted in these vessels, it would only have been the work of an instant. You will, therefore, my lord, perceive that the engineer has been found guilty of omitting to perform a duty which it was totally out of his power, through the absence of the necessary safe guards, to accomplish.

In my previous letter, I omitted a slight sketch, intended to be elucidatory of the actual state of the iron at the point where the rupture commenced. It will be in the recollection of all that, in the evidence given by Mr. Joyce before the coroner, the following statement was made:—"The boilers of the *Ant* and *Bea* were made by Messrs. Horton; their front plates were only five-eighths, those of the *Cricket* three-quarters; and, I think, the arrangement of the stays the same." By this passage, Mr. Joyce would have the jury infer, that the maximum strength of the front plates of the *Cricket* was considerably over that of the *Ant* and *Bea*.

Fig. 7.



Fig. 7 represents the actual thickness of those plates:—A, the plate of *Ant* and *Bea*'s boiler at the ash-pit; B, the strip, 3 thick, of the *Cricket*; C, the thickness of plate at the top and bottom of this 3 strip, which is only 1, or half that stated by Mr. Joyce; whilst the actual thickness of the front plate, C, of the *Cricket* is accurately delineated at D, the point where the rupture commenced, and shows the extent to which corrosion had reduced the 3 plate, which had been at its construction 3, not 2, and that at a point, too, where all practical men know that corrosion takes place more rapidly than at any other part. Now, it is a received axiom, that, in calculating the strength of material, we should take the weakest part—consequently, we should have to test the tensile strength of iron 3-16ths thick, instead of 1; and, since the tensile strength is only at its section at the date of the trial. The other vessels on this unfortunate calamity. I have now concluded my remarks on this unfortunate calamity. I much regret, for the sake of an injured man, that some counter influence prevented me being examined. My position—that of a working man, stating facts unpalatable to both parties—would have subjected me, coupled with my position, to an examination from which many would shrink, and which the commanding position held by a gentleman, who had so ably investigated the matter—I allude to Mr. Lloyd, the Government engineer—did not shield him. I was ready, for the sake of the injured man, to encounter all the disagreeable consequences attendant on an examination in a criminal court. I was anxious to free Hoeseman from the imputation cast on him by the acts of his predecessors. I was also anxious that the public should not be deceived; and that a class of men, of whom I am one, should not be subjected to the unmerited odium of following in the path of those whose acts justly entitle them, though now free from legal proceedings, to the scorn and derision of all careful men.—E. WHITLEY BAKER: Park Terrace, Battersea, Dec. 10.

DESCRIPTION OF THE ENGRAVINGS.

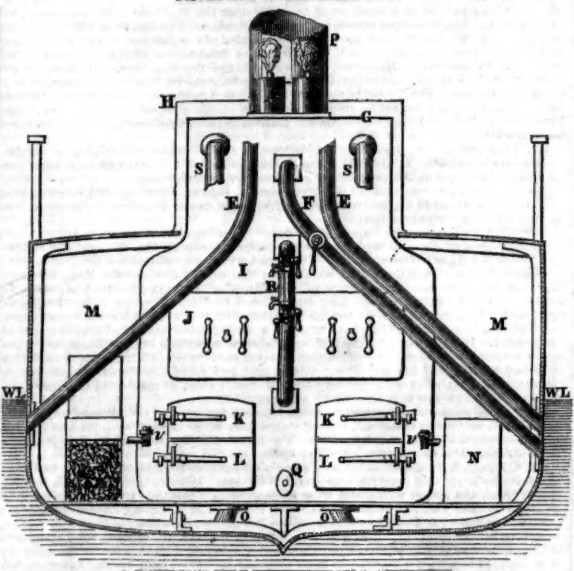


Fig. 8.—Is a cross section of a river steam-boat, of the usual construction, at the front of the boiler, showing the manner adopted by the engineer to turn off the steam, when stopping at the pier, the work of an instant—such means not being adopted in either *Cricket*, *Ant*, or *Bea* steamers. A, A, valve-boxes, shown in section at Fig. 9. E, E, waste steam-pipes, of same area as the valve, to convey the surplus steam under water. F, auxiliary steam-pipe, which conveys the steam direct from the boiler, also under water. G, top of steam-chest of boiler. H, steam casing, surrounding such steam chest. I, an oblong hollow tube, communicating at its lower end with the water, and at its upper end with the steam in the boiler; to this tube is affixed the gauge-cocks, and the water-gauge as shown. J, front part of smoke-box, which is taken down to clean the tubes; this part is constructed to allow of the passage of air in at its lower part, and out at the top, to keep the engine-room cool. K, K, furnace doors. L, L, ash-pit doors; on stopping, the invariable practice is, to open the furnace doors, K, K, and close the ash-pit doors, L, L. M, M, coal-boxes, on each side of boiler. N, N, doors in coal-boxes. O, O, two pipes, affixed under the bottom of boiler, for blowing out the mechanical impurities which settle to the bottom of the boiler. P, funnel, situated immediately at back of valve-boxes. A, A, water-line of vessel. Q, mud-hole door. S, S, steam-pipes, conveying steam from top of steam-chest to the cylinders.

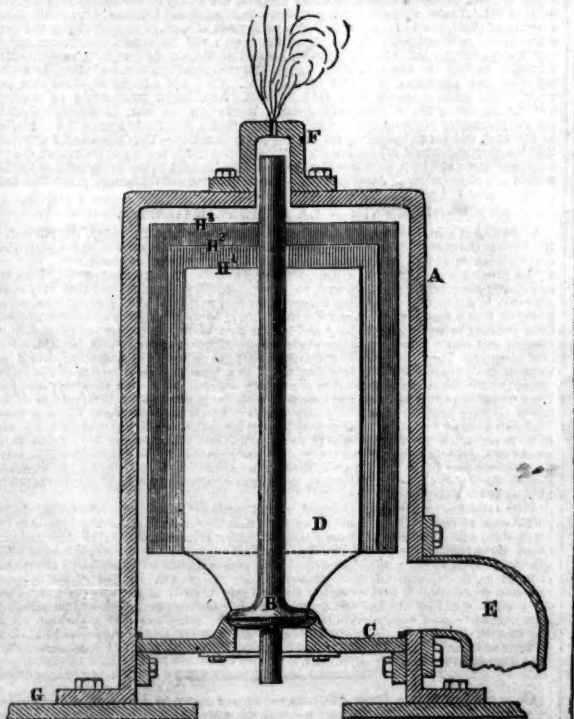


Fig. 9.—An enlarged section of one of the valve-boxes, A, A, which shows that in these vessels the valve is out of the power of the engineer to alter, as in the sealed valve, which the Belgian Government compel all who use steam in that country to employ. A, outer casing. B, conical valve. C, valve-sealing. D, lead weights, on the upper portion of the valve.

valve-spindle, which is maintained in a vertical position by the lower guide immediately under the valve seating, and the upper guide, or bonnet, F, which is perforated with a small hole, that tells when steam is blowing. H, I, shows the size of weights employed in the *Cricket*, and other 24-horse power nominal boilers. H, the size used in the *Waterman* and *Woolwich* steam-boats of 22 nominal horse-power. H, the size that would have been requisite for the *Cricket*'s high-pressure boilers, of the same nominal horse-power. E, waste steam-pipe, leading under water—such pipe having a small hole drilled in it in the engine-room, to prevent the formation of a vacuum in the pipe. G, top of steam casing. This is the form of safety-valve now becoming general, which, had it been employed in the present case, would have rendered the valve-tying system of this company's superintendent, Clark, and others, inoperative.

IMPROVEMENTS IN RAILWAY CARRIAGE WHEELS.

(Specification of patent granted to Robert Heath, gent., of Manchester, in the county of Lancaster, for certain improvements in wheels, to be used upon certain rail and other roads; which improvements are also applicable to mill gearing and other similar purposes.)—*Newton's Journal*.

This invention, which is applicable to carriage wheels, and also to mill gearing, consists in the peculiar formation of the wheels, in connection with the particular relative proportions of the different parts of the same, whereby the contraction consequent upon the cooling of the metal in casting is caused (instead of weakening the wheel), to bind the whole together into one solid mass. The wheels are in the first place formed entirely of cast-iron; and, although any kind of metal may be used, the patentee prefers to make them of what is called "cold-blast" metal, as being stronger and tougher than any other. The proportions which the patentee employs, and which he claims as his invention, are as follows:—The outer rim and the boss of the wheel are three times the strength of the arms, or thereabouts. Hitherto, cast-iron wheels have been liable to break, chiefly from want of a sufficiency of metal in the rim; because, when the rim is not sufficiently strong, it cools first during the process of casting, and the contraction of the rim ceases, while the contraction of the arms and boss are still going on. By making the rim three-times the strength of the arms, or thereabouts, the contraction of the rim is greater, and lasts longer than that of the arms, and thus the arms and boss of the wheel are bound firmly together by the contraction of the rim. This perfect contraction of the whole causes the rim to assume a correct circular form, so as to require no subsequent turning prior to use. The arms may be made either flat, round, or of any other shape; but they must retain the same sectional thickness at the rim as at the boss, and without any flanges or ribs, so that the arms shall not contract more or sooner at one place than at another. It is also preferred to make the wheels with an uneven number of arms, so as to assist the contraction of the rim; that is, having each arm opposite to the space between the two opposing arms. In making the driving-wheels for locomotive engines, a ring of metal is cast about half-way between the outer rim and the centre of the same, to prevent the thrust of the crank from breaking the arms, and this ring is made a little stronger than the arms, still preserving the above-named proportions of the outer rim, arms, and boss. Of course, it will be evident that the above proportions are applicable to the casting of wheels and pulleys, for mill gearing, and also to railway turn-tables, and other similar articles requiring strength. The patentee remarks, that he does not claim as his invention simply forming the wheels entirely of cast-metal, nor does he claim the dimensions or proportions of any one particular part; but he claims the combination of the whole—that is to say, a wheel formed entirely of cast-metal of the above relative proportions—viz.: having the rim and the boss each three times the strength of the arms, or thereabouts (whatever may be the diameter of the said wheel), and having the arms of the same of an equal sectional figure or thickness throughout, whatever may be the number or form of the said arms.

ACCIDENTS.

Cyfarthfa Stone Quarry.—T. Hickey was killed here by a fall of rubbish.

Glynedyr's Pit.—J. Harris was killed on the spot by the fall of a stone, weighing about 6 tons, and J. Evans so much injured, that life is despaired of.

Bunker's Hill Colliery.—A lamentable accident occurred here on Saturday last—five men (named J. Taylor, J. Parker, J. Walker, E. Whistance, and A. Ball) were being let down the shaft in a skip, while the water bucket was ascending the other; suddenly the engine was reversed, when the skip was thrown with great force over the pulley; Whistance and Ball fell down the shaft and were killed on the spot—the other three saved themselves by clinging to the pit frame. Dainty, the engineer, immediately absconded, but surrendered to the coroner's inquest, when the jury found him guilty of "manslaughter," and he was committed to take his trial at the assizes.

Spirit Tongues Colliery, Newcastle.—W. Watson was killed by a fall of stone from the roof.

Calcutta.—A Calcutta paper states the first explosion of fire-damp which has ever happened in an Indian coal mine, occurred in the mines of Messrs. Erskine and Co., at Satalnada, near Meghalpore, on the 17th Sept., when two miners were so severely burned, that they died shortly afterwards.

Chaderton, near Oldham.—As a bricklayer, named James Lyons, was at work in the colliery of William Jones and Co., Stock Field, Chaderton, erecting some brickwork near the bottom of the shaft, a stone accidentally fell from the side of the mine, and, alighting on his head, he was immediately deprived of existence.

Another Accident.—On Wednesday evening another of those fearful calamities to which the workmen in these mines are so constantly exposed, occurred at a colliery a few miles from Wigan, by an explosion of fire-damp. One man was reported to have been burnt to death, and several others also severely burnt; but our correspondent up to last night had not obtained the full particulars of the occurrence.

Pitfall at Dysart.—Four Persons Immured.—An iron-stone pit, above Dysart, fell in on Monday in the forenoon, killing or imprisoning two men, one of whom is Mr. McKenzie, the manager, and two boys. A great number of hands have been at work ever since, and we expect to ascertain their fate by to-morrow.—*North British Advertiser*.

Berns Colliery, Anglesey.—A series of accidents occurred here during last week: two men and a boy had taken their stations in the basket preparatory to being lowered to the working level—the shaft leading to which is 120 yards in depth: the descent had not well commenced when the basket, being insecurely placed on the hook, which is connected by a rope with the engine, lost its hold, and two out of three fell to the bottom of the shaft, and were dashed to pieces. The preservation of the third (who caught hold by the hook) was miraculous—he having been seized by a man upon the bank, and supported until further aid could be obtained to effect his rescue from so fearful a position. The mischief did not end here. The guiding rods which keep the baskets apart were thrown out of gear by the accident just related, and the efforts made to disengage them liberated a portion of the basket which had got jammed between them, and this striking a miner, named Parry, who was at the bottom of the shaft, on the nape of the neck, killed him instantly. The night preceding, a man, named Williams, was killed in the act of being lifted from a "sump" to the level; having imprudently dispensed with the basket, his own weight was insufficient to counterbalance the descending power. The cog-wheel performed its revolutions with a rapidity that brought the unfortunate man's head in contact with the roof of the level, with a crushing force. His head was completely fastened. It is right to state (says the *North Wales Chronicle*) that the whole of these accidents are traceable to a recklessness of their own safety on the part of the colliers themselves—who, being familiarised to danger, do not take the slightest care to guard against it.

The Floods at Wigan.—We noticed, last week, the overflow of the river Douglas, and the drowning of the colliers in that neighbourhood. We are sorry to have to record, that, notwithstanding every attempt made to lower the water, and get at the bodies of the unfortunate men, who were in the mine at the time of the inundation, the waters have again got the upper hand; and there is no chance but that the works must remain stopped for months, and 1200 people thrown out of employment. The coal proprietors, affected by these disasters, met on Wednesday, and resolved on plans for securing the river from causing further damage. On a careful examination of the bed of the river, it was found that the old mines had been worked to within 2 yards from the surface; and, from the action of the waters, nothing but a thin crust was left between it and the hollows, and the water penetrated in several places; all approaches to the mines were bricked up, and a new shaft was to be sunk for the two mines. All was proceeding rapidly up to Saturday last—the sides and bed of the river were well puddled and secured, as it was thought, with piles and planking, when, on Saturday evening, the heavy floods of rain, which poured in torrents all day, penetrated beneath the puddling, washed down the wooden barriers, rushed into the mine through the hollows, poured down the shafts in streams, and continued until Sunday afternoon. The pumps continued working, but the water gained upon them; and, on examination, it was found that the shafts were 130 yards deep in water, and still gaining, and in the evening it reached 150 yards. On Monday morning all hopes were given up—every barrier had been washed away, planks and piles washed into the mines, and great fears were entertained, that the two overfilled fields would sink into the excavations beneath. Many parts of the neighbourhood, on which the foundations, and the greatest alarm exists in the district.—"The inundation of the collieries at Wigan will, it is now calculated (says a contemporary), throw nearly a thousand hands out of work for months to come, and a new and fearful interest has been given to the catastrophe in the neighbourhood by an opinion given currency to by some of the more experienced miners of a possibility that the ill-fated work-people in the mine may be still alive. At a meeting in Wigan, on Wednesday night, at which upwards of 500 colliers were present, this opinion was maintained, and is set forth in the following address to the House of Commons, agreed to at that meeting:—"To the Honourable the House of Commons in Parliament assembled: The humble petition of the undersigned, residing in and near to Wigan, Lancashire, wives, children, relations, and friends of four men and two boys now in the Lower Patrickroft, humbly sheweth, that on Tuesday and Wednesday last, the water from the River Douglas, in Wigan, broke its banks, and overflowed into the coal mine called Lower Patrickroft, and where there were then working John Rutter, the elder, John Butter, the younger, Mathew Bates, Thomas Roch, John Sherry, and Michael Underwood, colliers. That these six persons were not able to get out of the pit, in consequence of the water, and that they are still in the pit, but whether they are dead or alive your petitioners cannot tell. That the rush of water has been so great that the engines of the colliemasters have not been able to keep down the water, and with the present engine power it must be many weeks, and perhaps months, before the water can be got out sufficiently to recover the six unfortunate persons who are now in the pit. Your petitioners humbly implore your honourable House to send down some greater engine power, to raise out the water and to send down the six persons who are in the pit, which buildings are erected, are known to be undermined to within a few feet of the foundations, and the greatest alarm exists in the district.—"The inundation of the collieries at Wigan will, it is now calculated (says a contemporary), throw nearly a thousand hands out of work for months to come, and a new and fearful interest has been given to the catastrophe in the neighbourhood by an opinion given currency to by some of the more experienced miners of a possibility that the ill-fated work-people in the mine may be still alive. 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put upon it. Parties choose rather to adapt what was found out to the mere money making usances of the world—this retarded science. If this had been the case when it was discovered that a piece of amber, when subjected to friction, would attract a feather, we never should have had an electric telegraph. That we required amongst us institutions that would educate us in general observation, as well as in other points. The theatre of the institution, in which the address was delivered, was extremely well attended.

SOCIETY OF ARTS.

DECEMBER 1.—WILLIAM WYON, Esq., B.A., in the chair.

Five specimens of painting on glass, by M. De Ron, of Munich, were exhibited. The Secretary stated, that the colours used by M. De Ron are peculiar, and the method of preparing them known only to himself. The colours used are glasses of different degrees of hardness, care being taken, in using them, never to put a harder upon a softer metal. Also, he uses both sides of the glass—this enables him to obtain clearness and decision of colour.—Mr. HALL offered some remarks on the history and manufacture of stained glass, and exhibited several specimens of modern manufacture.

Mr. S. MOUTON exhibited a model of an iron truss railway bridge, the invention of Mr. Rider, of New York. The peculiarities of this bridge are, its simplicity, lightness, and strength. Mr. Mouton stated, that the directors of the New York and Harlem railroad have erected a bridge on this principle, the span of it being 70 feet, and having a double track, or roadway, upon it; and the whole weight of metal used in its construction weighs only 13 tons, while its cost was under \$500. [A notice of Mr. Mouton's bridge appeared in the *Mining Journal* of the 6th November.]

A paper was read by Mr. ARCHER, on Engraving, with reference to monumental brasses and incised stones.—The author commenced, by referring to the very early period at which the art of engraving appears to have been known and practised by the lapidary and goldsmith, and the probability that those to whom the art was known, were subject to a precise code of laws, and connected with the priestly office, these laws having the effect of regulating the productions according to a given standard, set up by the heads of their order—thus giving a singular uniformity to the numerous examples of antique art, whether in painting, sculpture, or engraving. After alluding to the Egyptian, Etruscan, Greek, and Roman specimens of engraving, and similarly and common origin, he proceeded to point out the various purposes to which the art of engraving on brass was employed—such as the representation of geographical diagrams. In the time of Herodotus, public records were sometimes inscribed on brass tablets, a striking instance of which occurs in the preservation, down to the present time, of the will and acts of the Emperor Augustus. Having touched upon some few instances of the ancient practice of the caligraphic art, the author proceeded to detail some particulars of that process, as it appeared at the general revival of art during the middle ages. In the eighth century, by a law of Kenneth, King of Scotland, it was enjoined, that a cross should be put on every grave-stone (i.e. coffin-lid); and this appears to have been done in three ways—1st, by the use of incised lines drawn round the object; 2d, by producing the form in low relief; and, 3d, by wholly excised figure. The use of sculptured crosses appears to have originated with the general revival of art in the 13th century. One of the earliest specimens, is that of Sir Roger de Trompington, who died in 1289. The brasses of the 14th and 15th centuries contain, besides the effigies of warriors, churchmen, ladies, and civilians, many examples of beautiful decoration, derived from the architectural practice of the time, and different combinations of the letters I. H. S., composing the sacred monogram, appear in the brasses of the 15th and beginning of the 16th centuries. At the time of the reformation, these sacred monuments appear to have become obnoxious, and were accordingly, swept out of the churches with an unsparring hand, few comparatively having escaped destruction; of some of these, however, the author produced rubbings; and, having traced the history down to the 19th century, and referred to the latest of that period (prior to those produced under his own direction), proceeded to urge the desirableness of possessing, as a nation, a complete collection of the rubbings of the crosses of this country, as illustrative of the costume and history of bygone times. The plan of such a collection being deposited in the British Museum. The author then concluded his paper, by calling attention to the cartoons of several monuments, recently executed by himself, by a new process of working in brass, and which he promised to communicate to the society at an early period.—The discussion on this paper was postponed till the next meeting, and the SECRETARY announced, that additional specimens and rubbings would then be exhibited.

ON STEAM-BOAT EXPLOSIONS.

To the RT. HON. LORD DENMAN, Lord Chief Justice of Her Majesty's Court of Queen's Bench.

MY LORD,—In continuing my remarks from my letter in last week's *Mining Journal*, I shall have to call to your lordship's notice some of the evidence, as adduced before the coroner's court—this I do for the purpose of showing how material it would have been for the interests of the prisoner that some individual in his behalf had been examined. The first witness I will introduce to the notice of your lordship is the discharged stoker, Edwards, considered by all a vindictive man—here is a witness, who, having been cognizant of the practices carried on in this vessel for months, made no remark—with the exception of the oration for which, he did allege, he was discharged—who, on his oath, deposed to having seen the mercury in the pressure gauge at times as high as, 200 lbs. the value to be placed on the testimony of such a witness will be self-evident when I assert that, from the time of this vessel's commencing running to the date of the accident, she had one gauge, the one stated to have been destroyed at the time of the explosion, and that gauge only indicated to one hundred and forty, yet seen repeatedly by this witness at 200. (?) The evidence of Mr. Henry Grace is of value, as emanating from a surveyor, and one whose practice eye would have readily detected any deviation of the vessel's deck from a horizontal line, technically called "listing;" he stated, that he had been on board four or five minutes prior to the explosion—"When I went on board she was afloat and upright, she had arrived a few minutes before I embarked." The evidence of this gentleman makes me negative the idea, that the explosion was caused by the listing of the vessel, laying bare a certain portion of the tubes, which would then become overheated, and on the vessel's righting, on those tubes coming in contact with the water, steam being evolved more rapidly than the valves (admitting them to have been perfect) could allow of its escape. The absorption of oxygen has long been a favorite theory; but, in the present case, even admitting it possible to cause an explosion, when this gas is present, which is exceedingly problematical, the presence of incrustation on the tubes is fatal to its possibility; the same appearances also negative the spheroidal theory, one of much later origin.

There can, my lord, be in the present instance, I imagine, with all engineers who have inspected this vessel, but one opinion, which is fortified in the evidence of the convicted man, Heaseman, who stated that he tried the middle-gauge cocks about 14 minutes prior to the accident, and water came from their full bore—gauge cocks, though not an infallible guide, this may be relied on when the engines are not in action. Now, supposing him to have been in error, and they tried the lowest gauge cocks, situated 7 in. above the tubes, we then should have over 200 gallons of water in the boiler above the tubes; and if we admit him correct in his statement, of its being level with the middle gauge cock—a supply of over 300 gallons, an amount impossible to have been evaporated by the two 16-horse power boilers in quadruple time stated—we, therefore, must come to the conclusion, that the explosion was produced simply by an excess of pressure far over that design; that it was not caused by design, I think I can show to your lordship, through the evidence given by two witnesses, one of whom I will introduce for the purpose of showing that the very fact which, in his opinion, enabled him to speak so positively in conjunction with the other witnesses, as to the non-existence of steam, was one of the facts relied upon by me to establish the engineer's innocence. It was stated, as follows, by Mr. Hamilton—"I had been on the pier for five minutes previously observing the vessel; I am confident there was no blowing off, or escape of steam—the morning was particularly fine, and if there had been any escape of steam I must have seen it."

Now, my lord, it is a fact, and one well known by most engineers, that steam when discharging itself, as shown in my preceding letter (Fig. 6), at the lower part of the funnel, and mixing with the products of combustion, is in certain states of the atmosphere almost invisible, and, to the unpractised eye, entirely so. Steam issuing from a funnel when the day is fine and the air dry, is, therefore, invisible, and only becomes visible on a dull damp day, or when the atmosphere is surcharged with moisture. The state of the atmosphere in London at the time of the explosion will be seen by the following passage from a letter, most recently forwarded to me by the Astronomer Royal, in answer to an application for the state of the atmosphere at the time of the explosion:—"At 10 in the morning of the 27th of August (August 26, 22 in the astronomical reckoning), the barometer was at about 30.17 in, the thermometer 68.1, the dew point 58.7; the barometer and thermometer were a very little higher than usual, and the air a very little drier than usual."—G. B. ABBEY: Nov. 20, 1847.—Here, therefore, was one great point in favour of the prisoner; and had the attention of the jury been directed to it, some of them possibly might have called to mind that the steam issuing from another high-pressure boat, the *Locomotion*, and that under circumstances not so favourable to its success, is, on days like the 27th August, when the fires are clear, invisible. Had the valves been prevented from acting, as practised by this man's predecessors, the blast cock being shut off, the fires being good, we should have no such effect as that sworn to by the witness Wheldon, who stated that he heard a hissing noise, and saw ashes coming out of the funnel. The hissing noise heard by this witness, I have no hesitation in stating, was the steam escaping from the larboard weighted valve, visible at its exit from the top of the funnel through existing causes, combined with the dryness of the atmosphere. Were further confirmation necessary, it is added by the concluding part of his evidence, and this, too, emanating from a man ignorant of mechanical subjects, who, therefore, could not have intentionally stated the fact, with a knowledge of its being convertible beneficially to the interests of the Heaseman—"I saw ashes coming out of the funnel." The boiler of the *Cricket*, it has been already shown, did not possess sufficient draught. A draught-cock was added; the fires being good, that cock was shut off; but the escape of steam from the waste pipe had so increased the draught, that the products of combustion were in its passage through the funnel, accompanied by the lighter portions of fuel—the ashes—a striking confirmation, that the draught was excessive at the period when loss required. My lord, I hold it to be a point imperative on steam-boat manufacturers, that they place everything requisite for the safety of the public, and also of the engineer, on all vessels—more especially those in which high-pressure are employed—place every requisite—construct every appendage so that it cannot be accidentally deranged—leave it out of the reach of probability, that an accidental derangement can take place; it then resolves itself, such precautions being rank next to murder in our criminal code. Public safety calls for such an enactment—common sense dictates its absolute necessity. If it had been intended, in the present instance, to work to only 40 to 45, why place a weight, that could accidentally shift to 65? If intended to work at its maximum to 60, by the Salter's spring balance, why place a screw to the Salter's balance, that could be accidentally screwed down to exert a pressure, at its maximum, of 170 lbs. to the square inch, one hundred and ten pounds above the pressure required, and over forty pounds above the supposed bursting pressure? Had this screw been provided with a stop, when screwed down to 35 or 40, it could not, by accident, have exerted a greater pressure; the screw ought to have been so constructed in this balance, that the nut, when screwed down to its utmost (24 in.), would not go no further. It would then indicate 35 on the balance, and exert 70 on the boiler. But, as applied in this vessel, by screwing it down 14 in. lower from 45, where Skinner left it, it would then show 60, the pressure the man would naturally infer existing within the boiler, and one which he deemed safe; whilst the real pressure would be 120, or that at which rupture commenced in the unprovided boiler, when subjected to the hydraulic test. Why was this sent out indicating only half the real pressure?—That it was so, none can deny. Why it was so, is a point, with many others, that Mr. Joyce or his foreman ought to explain to the public. I shall now, my lord, bring this subject to a close, by showing, that the negligence of which your lordship charged the prisoner—not, however, intentionally—in omitting to "turn off the steam, on his arriving at the end of his journey," was a precaution which he could neither accidentally, or designedly omit—he had not the requisite means for so doing. In all the vessels belonging to public companies trading on the Thames, the engineer has at his command an auxiliary steam-pipe, which conveys the steam from the boiler under water. On the vessel stopping, this pipe is put in action by the engineer, or stoker, opening a cock (Fig. 8). The valves are also out of the control of the engineer—he cannot, if he wished it, any extra pressure. The waste steam-pipes, leading from the valve boxes, are conveyed under water, and not into the funnel. The *Cricket* had no such precautions, neither have the *Ant* and the *Bea*.

In the case of the *Cricket*, to turn off the steam at the end of the voyage, the engineer

must remove the top of the steam casing; he must then unscrew the Salter's spring balance; and, finally, if both weighted levers be required to be lifted, cut away, by means of a hammer and chisel, the 14 angle iron, which supported the flat plate, forming a portion of the top of such steam casing—an operation that would occupy some minutes; whilst, if the vessel had been fitted, as others on the river, which are working to only one-fifth of the pressure exerted in these vessels, it would only have been the work of an instant. You will, therefore, my lord, perceive that the engineer has been found guilty of omitting to perform a duty which it was totally out of his power, through the absence of the necessary safeguards, to accomplish.

In my previous letter, I omitted a slight sketch, intended to be elucidatory of the actual state of the iron at the point where the rupture commenced. It will be in the recollection of all that, in the evidence given by Mr. Joyce before the coroner, the following statement was made:—"The boilers of the *Ant* and *Bea* were made by Messrs. Horton; their front plates were only five-eighths, those of the *Cricket* three-quarters; and, I think, the arrangement of the stays the same." By this passage, Mr. Joyce would have the jury infer, that the maximum strength of the front plates of the *Cricket* was considerably over that of the *Ant* and *Bea*.

Fig. 7.

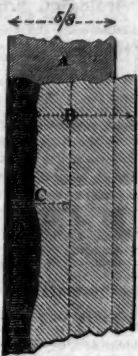
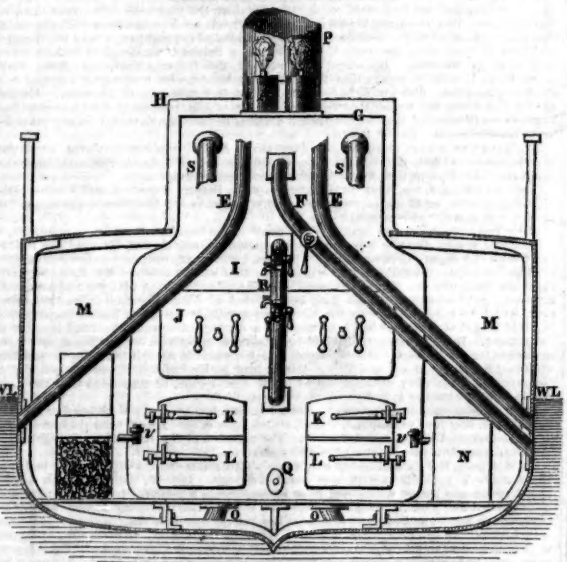


Fig. 7 represents the actual thickness of those plates:—A, the 5/8 plate of the *Ant* and *Bea*'s boiler at the ash-pit; B, the 3/4 plate of the *Cricket*; C, the thickness of plate at the top and bottom of this strip, which is only 5/8, or half that stated by Mr. Joyce; whilst the actual thickness of the front plate of the *Cricket* is accurately delineated at D, the point where the rupture commenced, and shows the extent to which corrosion had reduced the 5/8 plate, which had been at its construction 5/8, not 3/4, and that at a point, too, where all practical men know that corrosion takes place more rapidly than at any other part. Now, it is a received axiom, that, in calculating the strength of material, we should take the weakest part—consequently, we should ought to test the tensile strength of iron 3-16ths thick, instead of 5/8; and, since the tensile strength is only at its sectional area, we should have only one quarter that of a 5/8 plate. Neither is the statement correct of the arrangement of stays being the same in the *Bea*'s boiler. I have counted 16 that are efficient stays—in the *Cricket*, 11. In the boiler of the *Bea* at present there are effective stays, presenting an aggregate sectional area of over thirty-one square inches—in the *Cricket*, at the time of explosion, one sectional area of this one being seventy-eight hundredths of one square inch. Were the thickness of the front plates, as stated by Mr. Joyce, greater?—was the arrangement of the stays the same? I am aware that Mr. Joyce may urge, that the *Bea*'s boiler is oval, instead of circular; but that is a dilatory plea, which he ought to have shown to the jury. In conclusion, I will direct your lordship's attention to an assertion which I am capable of proving, and which was in existence at the date of the trial. The other vessels of this company have a similar arrangement of valve-box and waste steam-pipe. They have no correct index of the pressure exerted within the boiler; their boilers, though constructed widely different to those of the *Cricket*, bear testimony to the reckless conduct that has been pursued by those whose ignorance and temerity have caused so serious an amount of injury to the property of a gentleman who has most liberally and ably aided in rendering the once silent highway—the Thames—subservient to the uses of countless thousands of this monster metropolis. I have now concluded my remarks on this unfortunate calamity. I much regret, for the sake of an injured man, that some counter influence prevented me being examined. My position—that of a working man, stating facts unpalatable to both parties—would have subjected me, coupled with my position, to an examination from which many would shrink, and which the commanding position held by a gentleman, who had so ably investigated the matter—I allude to Mr. Lloyd, the Government engineer—did not shield him. I was ready, for the sake of the injured man, to encounter all the disagreeable consequences attendant on an examination in a criminal court. I was anxious to free Heaseman from the imputation cast on him by the acts of his predecessors. I was also anxious that the public should not be deceived; and that a class of men, of whom I am one, should not be subjected to the unmerited odium of following in the path of those whose acts justify entire them, though now free from legal proceedings, to the scorn and derision of all careful men.—E. WHITLEY BAKER: Park Terrace, Battersea, Dec. 10.

DESCRIPTION OF THE ENGRAVINGS.



Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Australian Mining Company—offices, at Twelve.
TUESDAY.....Kirkcaldy Mining Company—offices.
 Wheel Seton Mining Company—at the mine.
 Conduff Mining Company—at the mine.
 Alliance Gas Company—offices, at Two.
WEDNESDAY.....Wheal Mary Mining Company—at the mine.
 Eagle Steam-Packet Company—London Coffee-house, at Six.
 Pigot's Sound Agricultural Company—offices, at Two.
THURSDAY.....Oriental Bank Company—offices, at Twelve.
FRIDAY.....Bank of Australasia—offices, at One.
 Great Luxembourg Company—London Tavern, at One.

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

The seventh annual meeting of proprietors was held at the chief office, St. Mary Axe, on Wednesday, December 8.—Sir JOHN PIRIE in the chair (Sir J. Campbell, late deputy-chairman, declining to officiate).

Sir J. Pirie, in taking the chair, expressed his regret at the refusal of Sir J. Campbell to act, but promised to fill his place to the best of his ability.—Sir J. CAMPBELL stated, that before the close of the proceedings he would give his reasons for having declined the chair.

The SECRETARY (G. W. Howell, Esq.) proceeded to read the 14th half-yearly report, which stated that—

At the last half-yearly meeting it was stated that the directors at that time contemplated issuing shares in the course of the present year, to represent the additional capital of 500,000l., which, under the sanction of the directors of the Treasury, the proprietors are now authorised to raise, should a special general meeting be called for that purpose, determine in favour of the measure. It will scarcely be necessary to state the reasons why this contemplated proceeding was not followed up; the state of the money market, for some months past, pointed out to the board the prudence of abstaining from entering into any engagements for building new ships, which would require the additional capital referred to; and they are enabled to report that, up to the present period, no such additional capital has been required, inasmuch as the four ships now building—viz.: the *Chango*, *Bombay*, *Malta*, and *Exeter*—will, it is expected, be completed without calling for any portion of it. The operations of the company in the eastern seas have, as yet, been confined merely to the establishment of two main, or, as they may be termed, monthly trunk lines—one between the Red Sea and Calcutta, and the other connecting Bombay and China by means of steam navigation. When the extension under contract in the East was originally contemplated, it was supposed that the capital required for that portion of the undertaking would be about 400,000l.; but it has since become apparent that, to provide the facilities which the public demand, as well as to maintain the necessary number of supplemental vessels and the other expensive branches of a marine establishment, such as docks, warehouses, machinery, sea stores, coal depots, &c., in India and China, at a distance of 9000 or 10,000 miles from head quarters, a much more extensive staff, and considerable increased amount of capital, was necessary, and the directors have not been unmindful of these precautions.

The company have in India and China eight ships of 9000 tons, and 3200 horse-power collectively, for the purpose of maintaining the efficiency of the two lines referred to; and arrangements are being made for sending out to India, early next year, three additional vessels to strengthen the company's establishment in that quarter, and to place it in that independent and efficient position, on which the directors can alone rely for a continuance of public support. There are, at the present time, not less than four branch lines under the consideration of the board, which will require, at least, 100,000l. of additional capital.

The directors are quite willing to admit that the results of the first year of this company's operations, under the main contracts in India, &c.—viz.: 1848 to 1846—exceeded their expectations; and, had they been able to act upon that short experience, they might have recommended to the proprietors a somewhat larger division of profits; but it must be borne in mind, that, during the time alluded to, the amount of the company's capital employed, and on which a dividend was payable, did not exceed 550,000l.; and that the additional vessels required for the service were not then completed, which being now the case, has increased the capital in ships, &c., to 850,000l. Upon the subject of the profits of the undertaking it is clearly the interest of the proprietors (seeing that a portion of the funds is maintained in the hands of the directors, who, in the shape of small contract money, that they should be satisfied with a well secured moderate dividend, after due provision has been made to meet the depreciation of the property, and that all insurable risks are fully covered. Looking to the highly important national objects which such an establishment embraces, carried on at so many thousand miles distant, and the extensive character of its operations—likewise to the importance, even in a political point of view, to the Government, of having, in case of need, the immediate command and control of 30 first-rate steamships, averaging 1000 tons and 400 horse-power each, of steam navigation between Singapore and Sydney, would, in the event of a moderate return on their capital, and that the services performed efficiently, the proprietors may rely on the continued support of Government upon public grounds. In anticipation of raising some portion of the additional capital next year, the directors have under consideration the propriety of laying down at least four additional steamships.

The board has to report that the communication between Bombay and China was opened on the 3d of August last, by the extension of the mail contract vessels to Bombay, which thence returned only to Hong Kong, Ceylon, and started from that port as one of the termini of the China line. This additional service has required another vessel, as it embraces an increased mileage of 22,000 miles, if carried on throughout the year; it is probable, however, that the service may only be performed for eight or nine months annually, as the company are not under the stringent regulations of the mail contract service, as regards the extension to Bombay. There being no dock accommodation at Point de Galle, it became absolutely necessary to procure it at Bombay; and though it costs the company a heavy annual expense for docks, and the necessary establishment connected therewith, yet the directors had no choice but to provide the required facilities, at whatever cost might be necessary. The alternative was to dock the vessels at Calcutta, a distance of 1200 miles from Point de Galle, which was not considered advisable.

Reference having been made in former reports to the probability of a line of steam communication being established, under Government contract, for the conveyance of mails between the mother country and Australia, the directors on the present occasion have merely to repeat, that the subject still continues to receive their attentive consideration. To carry out such a service, which would embrace a distance of 109,000 to 110,000 miles annually of steam navigation between Singapore and Sydney, would, as already stated, require considerable Government aid to render it remunerative. At present comparatively little intercourse exists by this route with England.

The directors have now to report, that, on making up the accounts for the 12 months, ending last Oct. last, there is to the credit of profits and loss, the sum of 115,566l. 1s. 6d., after providing the charges for annual repairs, paid and in hand, and also the insurance of the company's property. Out of this surplus of 115,566l. 1s. 6d., provision is required to be made for the depreciation of the property, and the directors, looking to the amount of property added during the last year, consider that 20,000l. should be deducted and set apart for depreciation in the ships. In consequence of the charges during the last year on the "insurance fund," arising out of the loss of the company's steam-vessel, the *Fiber*, as well as of the balance advanced on the *Frederick VI.* store ship, that fund now stands with a credit of 108,599l. 9s. 4d.; and the directors, therefore, recommend that the sum of 15,000l. be taken from profit and loss account, and applied to the credit of the account in question, which will then amount to 123,599l. There will then remain in profit and loss 70,566l. 1s. 6d., from which the dividend declared and paid in June, 1847, being deducted—viz.: 4 per cent. for the six months—the balance will be 29,216l. 13s. 2d. The directors recommend that the dividend for the 12 months be made equal to 8 per cent. per annum, by now declaring a dividend of 4 per cent. (clear of income tax), for the six months, ending last October, 1847, which will amount to about 34,000l. A balance-sheet of the profit and loss account for the last 12 months, duly certified by the auditors, who have examined it with the company's books, has been prepared, and is open to any proprietor who may desire to inspect it.

On the 22d May last, the board of directors allotted each of 500 shares, out of the 1800 shares then unissued, of the original capital of 20,000 shares, of 500l. each, the number of shares to which he was entitled, in the proportion of one for every ten shares held by him. The holders of a fractional number under 10 shares were likewise informed, that for such they would be further entitled to a rateable proportion of the average premium on the shares remaining after this allotment. The premium referred to has not yet been realised, inasmuch as the number of shares to be taken up in India has not been finally ascertained, neither was the dividend declared for the interest of the parties referred to, to dispose of the remaining shares at the depreciation consequent upon the late commercial crisis; due notice shall be given at the proper time of the payment of this premium when realised.

The terms of the company's deed, requiring that two of the directors should go out of office every alternate year, as well as the two auditors, the proprietors are called upon to fill up the vacancies thus occasioned. The outgoing directors by ballot (Sir John Pirie, Bart., and Capt. Richard Bourne, R.N.), and the auditors (the Hon. T. L. Melville, and James Hunter, Esq.), now solicit the honour of being re-elected; and, as, according to the terms of the deed, they are immediately re-eligible, the court cordially recommends those gentlemen to your choice.

Major STRAITH moved, and another shareholder seconded, the motion, that the report be adopted.—Gen. BRIDGES was sorry that he could not concur in the adoption of the report. He must say that a more meagre and unsatisfactory document it had never been his lot to listen to. In the first place, he must remark that, attached to former reports, there had always been accounts, signed by the chairman and managing directors, of the different vessels in the service of the company, where employed, and many other necessary particulars. There was nothing of that in the present document. He would here request that the 53d article of the deed of Settlement be read to the court. (The article, which was then read, was, in substance, that the directors should prepare for each general meeting reports of the receipts and disbursements of the company for the 12 months previous, together with the profits and general condition of the company.) He asserted that the report did not contain this information.

The CHAIRMAN said, that the information required was in another document, which he was ready to hand to the gallant proprietor.

Gen. BRIDGES then alluded to the formation of branch lines in India. He believed it was the first the proprietors had heard of the matter. He should like to know, if it had been ascertained whether these branch lines were likely to be remunerative. It would appear that four branches were contemplated, requiring, at least, 100,000l. additional capital. They were not informed where these new lines would go to, being merely told that the object was to enable the company to carry passengers at a moderate rate. It appeared to him that more information was necessary on this point. If they were to depend on the European passengers travelling coastwise (in India), the profits would be small, and he did not know whether native passenger traffic was contemplated. A smart trade in opium might, indeed, be carried on, but the report gave no information. The report then stated, that the passenger fares had been reduced 10 per cent. He wished to know whether this reduction affected all passengers, or merely cadets? (Hear, hear, and interruption; several shareholders expressed their wishes that the speaker would condense his observations as much as possible.) He wished also for fuller information under the heads postage, and carrying the mail. He next came to the profit and loss account, to the credit of which he found the sum of 115,566l. 1s. 6d. He saw that the directors proposed out of this to divide 8 per cent., and to appropriate 1 per cent. to the depreciation and insurance funds. He should like to know whether any separate account was kept of the depreciation fund, where it was deposited, and to what purposes it was applied? The next question he had to ask had reference to the insurance fund, 108,599l. 9s. 4d., to which the directors proposed to add 15,000l. from the profit and loss account. He wished distinctly to understand whether a separate deposit of this was kept in a particular place, whether it was accumulating at compound interest. Then it would be satisfactory to know where the ships were insured, whether at Lloyd's (Questions, question.) He asked for the publication of accounts, but he was answered that such publication would not be convenient. (No, no.) Well, expedient; it was all the same. (No, no, and laughter.)

SHARPLEIGH: Is the gallant proprietor going to make any motion? (Hear, hear.)

Gen. BRIDGES, in conclusion, said he did not mean to make any motion; he merely wished for an answer to the questions he had put. He did not see why the accounts should not be published, as were the Royal West India Mail and other companies'.

The CHAIRMAN said, that the accounts were open to the inspection of the shareholders. If it was the wish of the court that they should be published, the directors had no objection. (No, no.)—Sir JOHN CAMPBELL said that the course now adopted was similar to that taken at former annual meetings. The directors did not publish the accounts, lest their so doing might be prejudicial to the interests of the shareholders, but they were open to the inspection of the proprietors. (Hear, hear.)

Mr. CARLETON (one of the managing directors) said, that the board were unanimous in rejecting all these questions had been put, as they were desirous of affording the proprietors on all occasions every information in their power. The first point on which information had been called for was that concerning the branch lines.—Mr. DENT: Which branch lines? The proprietors have never been consulted respecting them.

Mr. CARLETON said, that if the directors had thought the giving of information on this point would be advantageous to the company, it would have been given; but there were questions connected with these lines which they did not think it politic to make public. There were competitors, and, therefore, it had not been thought expedient specifically to name the branch lines. He could only say, that the branch lines were contemplated with a view of securing the trunk lines, such as Sontomamp and Alexandria, Suez and Calcutta, &c. With respect to the reduction in fares, he had to state that it affected not only cadets, but all other passengers. The reduction had given great satisfaction, and would be extended, if it could be done consistently with the interests of the company. (Hear.)

Mr. DENT: What is the charge for cadets?—Mr. CARLETON: 105l.; it was formerly 140l.—Mr. DENT: Mr. Green's ships take them for 70l.—The CHAIRMAN: I will find ships to do it at 50l.

Mr. CARLETON: Another reduction not alluded to in the report was in the passage money from Ceylon to Calcutta, which had been reduced from one-third to one-half, thus offering a great advantage to officers whose health required a change of climate. The next point on which explanation was asked was postage, as a source of revenue connected with goods and passengers. It was thought in an influential quarter that the postage should be sufficient for the conveyance of letters between England and India. As to the names of the company's ships not being in the report, they were in all the printed bills. With reference to the question of insurance, the vessels were insured at Lloyd's, and the plan was, to insure two-thirds of the property, leaving one-third on risk, the balance saved going to the growth of the insurance fund. As to the accounts, they had left them to the auditors, with whom the book-keeper was put in communication, and they were thus open to the inspection of the shareholders. This had been the course since 1840.

Gen. BRIDGES and other proprietors admitted that they had always received every assistance in examining the accounts. With respect to the sums allowed to the insurance and depreciation accounts, they were in bonds, in cash, and in Exchequer bills, and part, 12,600l., had been invested in the erection of the new premises.

Mr. DENT: Do the new premises belong to the company?—Mr. CARLETON: Yes, to the company—the directors paying 1000l. a year rent out of their commission. The principle upon which the directors had acted was to provide for the building of any new vessel required by the loss of a ship, out of the insurance and depreciation funds. They had done so, on the loss of the *Great Liverpool*, building a new ship at an expense of 68,000l., with a trencher on the capital of the company.

Mr. DENT wished for a statement of the amount of remuneration given to the managing directors.—Mr. WILCOX said, the hon. proprietor should have given notice of his question. The accounts were open to him any day.

Mr. DENT said, that without economy in the management, the company would not receive the support of Government or the public.

Mr. ANDERSON, M.P., as one of the managing directors, was willing to give every explanation. The company have the basis in the Peninsular Company, formed principally by Mr. WILCOX and himself. They had then procured an amalgamation with the City of Dublin Company, represented by Mr. Carleton, which brought them 300,000l. worth of property ships. He would remind the court that, at that time, he and Mr. Wilcox gave up their private business, which was considerable, and that Mr. Carleton relinquished the post of managing director in an established and flourishing company. It was arranged that their remuneration should be first 2½ per cent. out of the gross receipts, and 5 per cent. out of the net profits, out of which they were to pay all expenses of the London establishment, and the cost of the management of the company, and of identifying their interests with those of the company.—Mr. DENT: I approve of the principle.

Mr. ANDERSON—Now the amount of these emoluments had been much talked of, but up to 1845 it had only averaged 1800l. per annum for each managing director. Then in 1845 having succeeded, in the face of a tremendous opposition, in getting the Government contract for India and China, with an income of 160,000l., the profits were increased as much as to raise the average of annual remuneration to each managing director to the sum of 1800l. per annum. It was not until the year 1846 that the year 1840 to the year 1846, to 2556l. a year. The managing directors and their friends held no less than 4000 shares in that undertaking—being one-fifth of the whole capital of the company; and he thought that that circumstance alone would be sufficient to induce those directors to look carefully after its success. He would also remind the meeting that, not being very young men, it was necessary that they should take steps for keeping up a strong and efficient executive. Steps were in progress tending to a reduction of expenses. He did not think it necessary to state that the managing directors were not very young men, as he considered they were as much entitled to those emoluments as any proprietor to his dividends. (Hear, hear.)

Mr. HADDOVE wished to know, if an increase of capital was contemplated, when the proprietors were likely to be called upon to contribute?—Mr. CARLETON said, that nothing could be done in that way without a special general meeting.

Capt. MAXWELL moved that Sir J. Pirie, Capt. E. Bourne, directors, and Messrs. Melville and Hunter, should be re-elected. After a somewhat lengthened discussion the motion was unanimously carried.

Major STRAITH moved the thanks of the court to the board of directors.

Sir J. CAMPBELL thought this the fitting moment to explain the cause of his retirement from the deputy chairmanship. The hon. baronet entered into a somewhat lengthened explanation—the substance of which was, that on the death of Mr. P. M. Stewart, their late chairman, he (Sir J. Campbell) had thought that, after his long and assiduous services, the vacant chair should have been offered to him. The first intimation, however, which he received, was on the 3d of last month, when two of his colleagues came and told him that overtures had been made to a distinguished and influential Member of Parliament. In this manner steps had been taken to supersede him, without any consideration for his feelings. His colleagues had not come to consult him, but to tell him what had been done to his prejudice. (Hear, hear.) He had considered this conduct so discourteous, that after consultation with his best friends, he concluded that the only course left for him was to resign the deputy chairmanship.

After a dissenting opinion, the directors severally disclaimed any intention of offending Sir J. Campbell, and all stated their belief to have been that he did not wish re-election, the vote was agreed to. The report and the resolution, fixing a dividend of 8 per cent. per annum, were also agreed to.

Mr. WILCOX, M.P., said, that the only remaining business was to explain what had been the company's transactions with Lieutenant Waghorn. In 1840, that gentleman had the transit across the Desert with about 18 or 20 passengers a month. It was quite clear that he could not carry on the communication to India. The company offered to take his stock of his horse, and to allow him a guinea per passenger, which, at the present time, would amount to 1800l. or 2000l. a year. Lieutenant Waghorn refused this, being unwilling to be controlled by the company's superintendent at Alexandria, and the company were obliged to take the transit into their own hands. Corporate bodies, however, had no emitties, and the directors now proposed to subscribe 5000l. to the Waghorn testimonial.—Some proprietors objecting to this proposal, its discussion was adjourned to a future day.—Thanks were then voted to Sir John Campbell, and the board of directors, and the meeting separated.

LONDONDERY AND ENNISKILLEN RAILWAY.

A special meeting of shareholders was held on Thursday, the 9th inst., at the offices, Church-passage, Guildhall, to receive the report of a committee, appointed on the 20th October last, for examining into certain charges brought by the local directors against their London colleagues, and into other matters.—J. G. FARR, Esq., in the chair.—The report set forth that part of the works had been executed at an exorbitant price, and recommended that Mr. Leishman's claim of 26,000l. should be resisted by all legal means. The cost of Parliamentary proceedings, and the construction of the line from Londonderry to Strabane, amounted to 195,489l.; the receipts from calls, to 144,475l.—leaving a balance of 55,014l. to be provided for. This could only be done by enforcing the calls in arrears, as the directors had no power to make further calls without the sanction of a general meeting. Various reductions were recommended—viz.: that the directors' allowance should be reduced from 800l. to 300l.; that the services of the engineer, in receipt of a salary of 250l., should be dispensed with; and that the salary of the secretary should be reduced 50l. These, with other retrenchments in London and Londonderry, would effect a saving of 1040l. per annum. Contemplations were made of the expediency of the directors in enforcing the payment of arrears; and the committee recommended that when a director failed to pay his calls, his seat should become *ipso facto* vacant.—Mr. BATES, in moving the adoption of the report, said the cost of the line, including the working stock and apparatus, was 13,500l. per mile. They had a traffic of about 100l. per week, while their expenses were 115l. or 116l. He thought these might be reduced without impairing the efficiency of the staff. It was true the cost, as stated, including the Parliamentary expenses of the whole line (57 miles), was thrown upon the 144 miles constructed, but notwithstanding that it was very dear line.—The CHAIRMAN's anxiety, that the meeting should adjourn to afford time for the consideration of the report, the recommendations of which were now for the first time brought to the knowledge of the directors and shareholders. Accordingly, the meeting adjourned till Saturday, the 18th inst.

LOUVAIN LA SAMBRE RAILWAY.

A meeting of shareholders was held at the London Tavern, on Thursday, the 9th inst.—Mr. BELL in the chair.—This meeting was called in consequence of a desire on the part of the shareholders to obtain information respecting a report which had been made to them of the present state and future prospects of the undertaking.—It appeared, from the chairman's statement, that there were only two directors in London, and that they could not convene a meeting, three being necessary for that purpose. They pledged themselves, however, that a meeting of the shareholders should be called as soon as certain negotiations pending between the company and the Belgian Government were satisfactorily arranged, and that a statement of the whole affairs of the company should be laid before that meeting. They also pledged themselves that the calling of this meeting should not be prolonged beyond the 1st February next; that time for the payment of the call at present made should be prolonged to one month subsequent to such meeting; and that this arrangement should in no way interfere with the payment of an interest due on the 7th of January next, for which they believed they would have sufficient funds in hand. The CHAIRMAN said, that these concessions on the part of the directors appeared to him to be so far satisfactory, and that it was to be regretted that they had not been made three weeks ago. It now remained for the meeting to determine whether they should adjourn till after the meeting in question was held, or whether they would require Mr. Abraham to read the report which he had drawn up, in consequence of the resolution of the shareholders at the previous meeting.

After some discussion, it was carried, on the motion of Dr. Worthington, that the report should be read. This document set forth that the committee, having gone over the whole line, were of opinion that the directors had not evinced sufficient foresight and prudence in conducting the company's affairs; that it was necessary to reorganise the whole system of management; and that a competent person should be immediately despatched to Belgium, to superintend the operations which the present position of the company rendered necessary. It further stated that the only portion of the line (a short section) which could be finished and worked with a reasonable expectation of an adequate return on the cost of construction (the other portions being essentially through loans), was that between the last bank of the Sambre and Hanart, and from thence to Fleurus.—Mr. ABRAHAM dissented from the latter statement, and assigned his reasons.—After a brief discussion the meeting adjourned.

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COALBROOK DALE IRON-WORKS.—We are sorry to learn, that the colliers at these works are to be put on half-work next week; the ironstone-pits, we are informed, are to continue in full operation, in consequence of the small stock of iron mine now on surface.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The lode in the 18 fm. level end, west of Slob shaft, is at present 18 in. wide, 10 in. of which is well mixed with ore, and worth from 9l. to 10l. per fm., taking a perpendicular course down; the slopes in Doyles and bottom, behind this end, are worth about 8l. per fm. The back over Doyles's slopes, in the 18 fm. level, is worth from 18l. to 20l. per fm. We have been clearing deads in the 28 fm. level—consequently, have done but little to the lode. We have suspended the 12 fm. level end, west, and commenced driving east from Slob shaft, to hole the ground, which can now be accomplished for less than half the price of driving; west in this end we have a lode 8 ft. wide, mixed with lead, worth about 6l. per fm.; in the 12 fm. level end, west of Slob shaft, the lode is also large, 2 ft. wide, and worth about 6l. to 8l. per fm. The pitches generally through the mine look a shade better than for the last month. The lode in adit end east is large and poor; it has changed its character from a white iron to blende.—Dec. 8.

BEDFORD UNITED.—At Wheal Marquis, we are still driving in the cross-course in the 90 fm. level east, the lode in this level west, on the south lode, is 2 ft. wide, composed of ore and spar, worth 20l. per fm.; this level west, on the north lode, is suspended. The lode in the 80 fm. level east is 2 ft. wide, not very productive, but wears a very kindly appearance; and in Hooper's winze, in this level, the lode continues poor. In the 70 fm. level east the lode is 2 ft. wide, composed of spar, with a small proportion of ore; there is no alteration worth noticing in Harvey's winze, in this level. The lode in the 25 fm. level, east of the south engine-shaft, is 18 in. wide, composed of spar, intermixed with grey ore; and in the adit level, on this lode, the lode is 15 in. wide, poor at present.—Dec. 7.

COATLITH HILLS.—In the beginning of this week the men employed in the level, west from A shaft, cut a communication to the rise in the back of the horse level. The communication having drained the level east from the shaft (on the course of the vein), I intend driving it east with all possible speed.

COOK'S KITCHEN.—In the 190 fm. level, west of the engine-shaft, the part of the lode which we are carrying, is 7 ft. wide, and producing a little tin. In the 180 fm. level west the part of the lode which we are carrying is 4½ feet wide, and worth about 20l. per fm.; in the 180 fm. level east the part of the lode on which we are driving is 4 ft. wide, and worth about 6l. per fm. In the winze, sinking under the 170 fm. level east, the part of the lode which we are carrying is 4½ ft. wide, and worth about 7l. per fm. In the 180 fm. level driving north, for the purpose of cutting the north part of the lode, the change in the ground appears to indicate that the part we are in search of is not far off. In the Druid lode, we are in course of clearing the western adit shaft, in which we have got down about 20 fms., and have about 18 fms. more to clear to the adit. The tribute department is much the same as for some time past.—Dec. 6.

COOMBE VALLEY QUARRIES.—Our works have this last week been visited by several gentlemen, largely interested in their prosecution, they being also very extensive Cornish mining proprietors; it gives me great pleasure to inform you, their opinion is perfectly unanimous—viz.: that in a very brief period those undertakings will form one of the most positive and certain speculations now at work in North Cornwall. They have each written to the committee a private report—an extract from which, with their permission, I will forward you in another week. I herewith send you a specimen of slate, taken up in the presence of the above gentlemen, which will be found equal in quality of most of the best Welsh quarries; also another specimen taken from the same rock 17 years ago, and which has been exposed to the influence of the atmosphere, and in a wet situation ever since that time; it will be found not the least deteriorated in texture so long a period of exposure, proving at once the durability of this kind of slate. I hope, in the course of a fortnight, to furnish you with an interested detail of the future prospects of the company.

CUBERT SILVER-LEAD.—We have this day held our public setting for December, and have set 15 pitches, employing 84 men, and 5 tubwork bargains, 18 men. The ground in the engine-shaft is much the same as it has been for some months past, very hard and wet. Going east, in the 35 fm. level, the lode is 2 ft. wide, composed of hard spar, mudiic, and a little lead; in the west end, in this level, the lode is 20 in. wide, spar, mudiic, and lead—a promising end. In the 25 fm. level west the lode is 10 in. wide, composed of soft spar, mudiic, and some good saving work—a kindly end. In the 15 fm. level west, the lode is at this time split into two parts, about 5 in. each, yielding some very good work for silver-lead.—Dec. 3.

DARTMOOR CONSOLS.—We have holed Henry's shaft to the shallow adit, which is 15 fms. from surface, and the men are now employed in cutting a pit, &c., so as to commence again under this level; the ground is favourable for sinking, being of a soft decomposed granite. We are also getting on very progressively with the wheel-pit, but the weather has been against us the last few days; notwithstanding, the masons have stood its severity. The men are also engaged in fixing the flat or horizontal rods, pulleys, &c., as well as erecting a whim at Henry's shaft.—Dec. 9.

DEAN PRIOR AND BUCKFASTLEIGH.—We have commenced sinking the engine-shaft, below the 24 fm. level—price for sinking, 12l. per fm., by nine men, stinted 4 fms., or until the last Saturday in this month, that being the monthly setting-day at this mine. In the 20, or bottom level, driving west the lode has a very promising appearance, about 2 ft. wide, composed of capel, pryan, and spar; in this level the lode generally has been large and regular, varying in size from 2 ft. to 8 ft. wide, and been driven on to a great extent, and in driving has produced fine specimens of horseflesh and yellow ores, of excellent quality, which are good indications, and not only so, but shows the strength of the lode in going down; and in the deeper levels I anticipate the most favourable results. In the slopes, in the back of the 10 fm. level, the lode is about 7 ft. wide, composed of capel, mudiic, spar, and iron; the ore part of the lode is about 12 in. big, saving work. The carpenters are engaged making and preparing the launders to carry the water over the 24-fm. water-wheel; while in the past week they have been engaged about other necessary work connected with the underground operations, and also about fixing a whim in the 10 fm. level, which will be greatly in favour of the future proceedings, as to changing boxes, and dropping the bottom lift of pumps, &c.—Dec. 7.

DEVON AND COURTENAY CONSOLS.—The lode in our deep adit level is 8 in. wide—6 in. of which is producing good work for lead ore; I think there is every reason to expect an early improvement in this level; the ground in our engine-shaft continues favourable for sinking; and, I think, by another week, we shall be deep enough, except sinking a little for a fork, to commence driving to intersect the lode; the pitches, on the north lode, continue to produce some good work; the floors are nearly completed, and we shall commence dressing our lead ores in a few days.—Dec. 7.

EAST CROWDALE.—The ground in our engine-shaft is rather improved for sinking, having got clear of the range of spar which has retarded our operations for several fms.; it is now down 49 fms. 1 ft. The lode in the 47 fm. level east is still poor, but is, from appearances, very likely to make a bunch of ore in a few feet driving, the lode being composed of the same kind of stone as when the shaft went through it, only not so much ore; it is upwards of 2 ft. wide, composed of spar, capel, peach, mudiic, and good stones of ore. The lode in the shaft, sinking on the course of the north lode, at Rix Hill, is still disordered with floors of killas; it is about 5 ft. wide, composed of killas, peach, mudiic, and stones of tin at times; this shaft is down 5 fms. 3 ft. below the adit level. The lode in the adit level west, at Rix Hill, continues of a most kindly description; it is about 2½ ft. wide, composed of capel, peach, mudiic, spar, and stones of tin—in fact, the appearances of the lode in this level fully warrant the opinion that a course of tin is near at hand. In cross-cutting south we have cut another lode, the appearance of which we cannot as yet give you any idea, only having just cut the north capels; I hope to give you a good account of this place in my next report.—Dec. 4.

GALLOWAY.—By eastening on the north and south lode we have traced this lode about 60 fms. south from the old workings towards the east and west lode, at which point the lode is 7 ft. wide, chiefly composed of a fine gossan, spar, pryan, and flookan. On the east and west lode we are cutting an open cast on the back of this lode, with a view to unwater the point of intersection, where we propose to sink a shaft; we expect, in course of another fortnight, to arrive at the point of intersection.—Dec. 4.

GREAT HEWAS CONSOLS.—During the past month every effort has been made on our part for the development of the mine, so as to aid this meeting in its decision as to unappropriated shares. The adit, between eastern and Carthew's shafts, has been cleared out, for the purpose of ventilation, and in order to make the bottom of the adit available for pitches. In one instance we have found the lode 5 fms. under adit (as has been already noticed in my letter to the purser), where the lode is of great promise, and is worth, at least, 20l. per ton, and is in whole unexplored ground. Another winze is in course of clearing in the bottom of the adit, where 40 fms. west of the shaft, and we expect to see the lode here also in a few days. Carthew's shaft is in course of sinking, and is progressing favourably, the object of which has been repeatedly stated. We have succeeded also in clearing North's shaft to the 36, and shall be able to commence cross-cutting therefrom to intersect Hewas lode, which is supposed to be 17 fms. off (and of which 13 fms. were driven by the old adventurers), earlier than was expected, and should the result be favourable, as is generally anticipated, it will certainly give our adventure a new feature. The 36 fm. level, between eastern and North's shafts, is in bad condition in many places, but we hope to clear and secure it before the next account, forming a communication between those two shafts, and opening up a great deal of kindly tribute ground. I was underground here yesterday, and was surprised to see the nature of the lode in this part of the mine, and the quantity of tin-ground available. Calculating from the underlie of the lode, we have unexplored ground 40 fms. high, and 70 fms. long, in all 2800 fms.; and will all work at from 10s. to 12s. in the 11. Since our last meeting, the reported 26, at Stanley's, has turned out to be a 40 fm. level, which induced us to continue pumping, opening up hundreds of fathoms of tribute ground. Our last meeting's report stated that we had engaged 23 tributaries, and that we had a prospect of employing 60 from that day two months; and I am happy to state, that we have every prospect of doing what was then anticipated, having already set to 28, but, as some have not begun to operate, we will only calculate as having actually set to work about 80, but are almost daily adding to the number. The pitches in course of working are, upon

he whole, looking very promising; and the good course of tin, mentioned at the last meeting, as being worth 20¢ per fm., has improved, and is worth 40¢ per fm. A great deal of kindly timber is now being drawn to the surface, and therefore we are actively engaged in erecting stamping-mills. As to the iron lode, we have suspended driving here for the present, whilst we are raising the ore at 2s. 2d. per ton from the back, and two cargoes will be shipped for Wales during the month.—Nov. 24.

GREAT MICHELL CONSOLS.—The lode in the sump winze is 5½ ft. wide, containing muddle, spar, and ore, producing some good saving work, and is, in its general character, exceedingly promising. In the 85 fm. level, west of the sump winze, the part of the lode being carried is 4 ft. wide, still opening good tribute ground; the pitch in the back of this level, now being worked at 8s. 6d. in the 17, is yielding good returns.—Dec. 7.

HOLMBUSH.—The ground in the 132 fm level, south of the diagonal shaft, is still favorable, but, as yet, we have intersected no branch. The ground in the 120 fm. level, west of the great cross-course, and south-west of Hitchins's shaft, is favorable for driving; in the 120 cross-cut, south-east of Hitchins's shaft, the ground being so very hard, we thought best for the time to suspend it; the lode in the 120 fm. level, south of the old level and east of cross-course, we have set to stop at 27. 10a. per fm.—It will produce 2½ tons of ore per fm. The 110 fm. level south, on the lead lode, is for the present suspended, and the men set to rise above the back of the level, both for ventilation and laying open tribute ground, where the rise will be commenced—the lode is worth 8¢ per fm. The lode in the 100 fm. level south is 4 ft. wide, composed of quartz, blende, and stones of lead, saving work; we have three tribute pitches in the back of this level, wrought at 12s., 8s., and 5s. in the 12. on the value of the lead. The lode in the 90 fm. level south is 2 ft. wide, composed of floukan and spots of lead.—Dec. 7.

KIRKCUDBRIGHTSHIRE.—The lode in the 50 fm. level end west is 3½ ft. to 4 ft. wide, producing about ½ ton of lead per fm. The lode in the 40 fathom end west is 4 ft. wide, producing ½ ton of lead per fm; the winze sinking under this level continues to yield 1 ton of lead per fm. The lode in the 30 fm. end west is 4 ft. wide, producing stones of lead, with indications of an increase. The lode in the 20 fm. end is 9 ft. wide, and looking much the same as last reported. The lode in Keith's shaft is 3 ft. wide, and is similar in appearance to that of the 20 end, very kindly, but without lead. We have 34 men on tribute, who are working with great spirit, and I believe the greater part of them are getting fair wages.—Dec. 4.

LEWIS.—The lode in the engine-shaft is 2½ ft. wide, unproductive at present. I am glad to inform you, that the lode in the 60 east, on south branch, is 18 in. wide, worth 20¢ per fm., and very kindly; the lode in the 60 west is much the same as when last reported; the above-mentioned ends must suspend, in order to put the men to rise against the winze sinking below the 50 fm. level, for a better ventilation; the lode in the 60, east of tin shaft, is 2½ ft. wide, worth 3¢ per fm., and very promising. The lode in the 50 east, on south branch, is 1 ft. wide, worth 8¢ per fm. very much improved since last report.

POLSAITH CONSOLS.—I visited Polsaith Consols on the 18th Nov., at the request of one of the shareholders; I confined myself (time being short) to an examination of the north, or tinners' hill, part of the set, it being in that part of the set that the new discoveries have been made. My opinion, formed on an accurate examination of the character of the lode, is as follows:—The lode (which is, on an average, 5 ft. wide) is strong and well defined, composed of gossan, with fine stones of lead, interspersed with stones of carbonate of lead and greens—altogether strongly resembling the lode at Trelawney and Wheal Mary Ann. With respect to the work done, I am of opinion that the shafts are sinking in positions likely to prove the mine satisfactorily, both in the valley and in the hills. From what I have seen of the lode, I am inclined to think, it will prove exceedingly productive in the valley, which is full 150 fm. on the course of the lode. On the whole, I can give it as my candid opinion, that the mine promises to be a very profitable speculation. I observed, that there have been erected a large smith's shop, powder and timber houses, and that they are preparing to erect an engine-house, the engine being on the mine.

SOUTH DOLCOATH.—I have nothing particular to report on at present, having suspended the 40 end west, and put the men to make the necessary preparations for sinking the shaft; and, I assure you, I am quite glad that you have come to the determination to sink the shaft; for I am decidedly of opinion, that it will be found to be the most important operation to show the resources of the lode. Whenever gossan is found so deep in a lode, we find, generally, that ore, when found under it, is most permanent. I hope we shall be able to commence sinking by the end of this week, or early in the next.—Dec. 6.

SOUTH FRIENDSHIP WHEAL ANN.—In the 52 fm. level east the lode is still of a promising character, and carries more copper than ever was seen before in that level, and there is every reason to expect improvement. In the 28 cross-cut south we have added two men more, so as to push it on; the ground is rather harder for driving, being composed of black cap, barytes, &c., which is not at all uncongenial for copper in this locality. We are also frequently intersecting floors of bright yellow copper, muddle, &c.—Dec. 9.

SOUTH WHEAL BETSEY.—We have commenced clearing and securing the deep adit brought up from the Great Wheel Friendship, in order to put in timber, &c., for a road, as the water is rather deep. We have also commenced shodding, in order, if possible, to cut the lode from whence we expect the greens proceed—that is, in the side of the adit. We intend, in a day or two, to commence driving, in order to cut the Great Wheel Betsey lead lode, which we calculate is about 26 fms.; when cut, it will leave 60 fms. back to the surface. We are also preparing for a winch, change house, &c., as well as clearing up the sink in the bottom of the shallow adit, where we intend to set a pitch on tribute.—Dec. 9.

SOUTH WHEAL TRELAWNEY.—The shaftmen have been engaged last week in cutting holes for bearers, putting in cistern, fixing lift, &c., and in dividing and casing down the engine-shaft from the whim-shaft; this week with renewed vigour to sink the engine-shaft.—Dec. 6.

TINCROFT.—The 100 fm. level ends are at present unproductive, each end being near a cross-course, beyond which we had a good lode in the level above. The lode in the 90 end west is 20 in. wide, producing some ore. The lode in the 80 end east is 2½ ft. wide, producing good work for tin. At present our outwork is very limited in this part of the mine, on account of the low price of tin and copper ore, which, no doubt, will be higher again soon. At Palmer's, we have commenced sinking below the 80 fm. level; the lode in the 80 west is 20 in. wide, producing some ore, and kindly. The lode in the 70 west is 5 ft. wide, ore throughout, worth 30¢ per fm.; the lode in the back and bottom of this level are worth 20¢ per fm. The 60 and 48 west are producing some ore, and kindly. We have now 44 men working on tribute in this part of the mine, all opening productive ground. At the south mine, on Highburrow lode; the bottom of the 152 is now worked by eight men, at 10s. tribute, and I believe making fair wages. The lode in the 142 east is large, and thin throughout, ground hard; we expect to hole the winze to the rise shortly. The lode in the 120 east is 4 ft. wide, worth 20¢ per fm.; the lode in the lodes is very large (how large we cannot say), and producing good work for tin, worth 25¢ per fm. Our pitches in this part of the mine continue to yield fair quality tin-stuff. At Wheel Providence, we are cutting down the end of the shaft from the 12 to the 20 fm. level, which will occupy this week.—Dec. 6.

TRELIGH CONSOLS.—Christie's shaft, below the 110 fm. level, is sinking in the country. In the 110, east of Christie's, the lode is 18 in. wide, with stones of ore only, disordered by a part of cross-course. Garden's shaft, below the 100, is sinking in the country, carrying a part of the lode, 18 in. wide; in the 100, west of ditto, we are still driving south on the lode, which is very hard, and little ore; in the rise, above the 100 east, the lode is 20 in. wide, but little mineral. In the 90, west of ditto, the lode is 2 ft. wide, not so good as last week, producing stones of ore; in the winze, below the 90 east, the lode is 2 ft. wide, no ore to value. In the 80, west of ditto, the lode is 3 ft. wide, impregnated with ore, but not to value. In the 70, west of ditto, the lode is 14 in. wide, but very little mineral. In the winze, below the 60 west, the lode is 20 in. wide, producing but a small quantity of ore. Wheal Parent engine-shaft is sinking in the country. The adit cross-cut north, is driving towards the engine-shaft. In the whim-shaft, below the adit, the lode is 20 in. wide, of a kindly nature, with stones of ore and muddle. In Lockett's shaft, below the 10, the lode is 14 in. wide, with good stones of ore, not to value.—Dec. 4.

WEST WHEAL JEWELL.—In the 57 fm. level, east of Williams's cross-course, on Wheal Jewell lode, 18 in. wide, unproductive—drove last month, 1 fm. 4 ft.; in the 57 fm. level west, on the same lode, 18 in. wide, worth 4¢ per fm.—drove 1 fm. 1 ft. 6 in. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, 18 in. wide, producing stones of tin—drove 3 ft. 6 in.; ditto, south, we have cut the lode in the past week, 2 fms. 4 ft. 6 in. with a very promising appearance for tin—drove last month, 2 fms. 4 ft. 6 in. In the 20 fm. level, west of Quarry shaft, on the same lode, 15 in. wide, worth 12¢ per fm.—drove 3 fms. In the deep adit, west of Quarry shaft, on the same lode, 10 ft. 1 ft. wide, worth 5¢ per fm.—drove 1 fm. 1 ft.; ditto, south, 2 ft. 6 in. In the shallow adit, west of Quarry shaft, on the same lode, 18 in. wide, unproductive—drove 1 fm. 4 ft. 6 in. In the lodes, in the bottom of the adit, east of Pryor's winze, 10 ft. 5 ft. wide, worth 45¢ per fm.—stopped last month, 5 fms. In the lodes, in the back of the 12 fm. level, west of Pryor's winze, 10 ft. 5 ft. wide, worth 25¢ per fm.—stopped last month, 4 fms. 3 ft.—Dec. 6.

WEST WHEAL MARIA.—The water is drained all through the mine, and the men resumed sinking the eastern engine-shaft under the 30 fm. level—the lode in which is about 3½ ft. wide, producing good stones of ore. We resumed driving the cross-cut south in the 54 fm level this day. Our engine and pit-work are in good order.—Dec. 7.

WHEAL ADAMS.—The eastern lode in the end, extending south from the rise, in the 50 fm. level, is worth 10¢ per fm.; the quartzose lode has been cut into in this level further south, where it is worth 9¢ per fm.; we hope to resume stopping this ground in about a week from this time. The jack lode has not been wrought on since our last report; but we have made every preparation to resume stopping it forthwith, and shall, in a few days, commence clearing the level on the western silver-lead lode, and open the ore ground said to

exist south of the new engine-shaft, and be in a position to explore this part of the mine on the numerous branches traversing it. The lode in the 18 fm. level is 4 ft. wide, consisting of gossan and stones of black oxide of copper—a very kindly lode; we propose intersecting the middle branches, as also the eastern lode, from the point we have risen on, the gossan part, where neither of them have been seen.—Dec. 7.

WHEAL ANDERTON.—Dec. 1.—On opening the lode in the 70, the lode is much better than I expected to see it before further progress was made; the lode on the south wall is 2 ft. wide, very good—this is to the east of the shaft. We shall now turn attention to open on the ground west, and also to extend our workings, so as to put on more men. I may further observe, that we are now getting into the shoot of tin we had to the west in the 60—therefore, I consider the value of the mine greatly enhanced, from the prospects it presents in going down. The lode 60 west still continues to look well, as also the backs. Another pitch has been set, at 3s. in the 12. We are getting on with clearing ore with all possible dispatch.—Dec. 9.—On Saturday, December 4, being our monthly setting day, I beg to furnish you with the number of pitches and bargains set at the different levels:—Two pitches in the back of the 50 fm. level, at 7a. in the 17; one in the 55, at 6a.; four in the 60, respectively—3a., 5a., and two at 5s. 6d. each; one in the 70 fm. level, 2a. 3d., all of which, I confidently believe, are remunerating prices for the labourers; the 70 fm. level to drive west, at 4¢ per fm.—the lode in this place is 6 ft. wide, with very good stones of tin, and 2 ft. of it good saving work. The 60 west, at 70a. per fm.—lode 4 ft. wide, from 16 to 18 in. good work for tin; in the 60 east the lode is 2½ ft. wide, very kindly when set at 55a. per fm., but a great improvement since; the lode, as we leave the slide, is getting larger, and producing more tin—in fact, all the lode is good work, that will not cost above 3s. in the 12 to make it marketable. I shall sample 6 to 7 tons of tin ore on Monday next, and am still preparing more to follow in succession. The drawing machine will be set to work to-morrow, as the contract with the whim-drivers expired on Tuesday last.

WHEAL MARY ANN.—The lode in the 30 fm. level, south of Barratt's shaft, is 4 ft. wide, and worth 20¢ per fm.; the ground is much better for driving, paying now only 50a. per fm.; we have also had two samples assayed of the muddle raised from this level—No. 1 produced 5 in 20 for lead, and 33-ozs. of fine silver to the ton of ore; and No. 2 (apparently a solid stone of muddle) 42-ozs. of fine silver. Pollard's shaft is sunk 7 fathoms below the 15 fm. level, ground favorable for sinking; the lode in the 15 fm. level, south of Pollard's shaft, is much the same as was last reported. The lode is looking well. Our parcel of ore, computed 40 tons, was sold on the 27th ult., to Messrs. Michell and Son, at 18s. 17a. 6d. per ton.—Dec. 6.

WHEAL TRELAWNEY.—The lode in the 52 fm. level south is 3 ft. wide, chiefly composed of can, and worth 8¢ per fm.; the same level north is worth 12¢ per fm.; the lode in the back of this level are looking very well. The lode in the 42 south is in a disordered state, producing a little lead; this level north is worth 8¢ per fm.; the lode in the back are producing a moderate quantity of ore. In the 32 end north the lode is small, but is saving work; the lode in the winze, sinking under this level, is worth 8¢ per fm. The lode are yielding a fair quantity of ore. In Trelawney's shaft, sinking under the 42, we have met with some branches dipping towards the lode, composed of spar, carbonate of lime, and stones of lead ore; those branches came in the shaft with an elvan-course, which make it hard for sinking. The 42 cross-cut west, and the 22 cross-cut east, of this shaft, are not much changed. At Vivian's shaft the lode is yielding some good ore.—Dec. 7.

FOREIGN MINES.

ALTON MINES.—Mining report from the 8th to the 25th October, 1847.—Raipas.—The improvements before alluded to continue to make a gradual and steady progress, and the prospects, for enabling us to make regular and permanent returns, are now greater than for many years past. Shaft No. 1 has been holed to the workings on Carr's lode, and next month, we hope to commence stoping on the reserves laid open by the former excavations. A communication has also been formed between the foot stops at the surface, and the roof stops on Labouchere's lode, which, by means of the adit and 3 and 10 fm. levels, has now explored to a perpendicular depth of upwards of 20 fms. The lode in the 5 fm. level continues to make fair returns, and is equally promising; whilst in the 10 fm. level, it has undergone a still greater improvement. A new pit has been cut in the 10, and a penthouse has been put into Monk's shaft, and we hope to commence sinking towards the 20 fm. level in the early part of next week. The immense collection of ore in the old 20 fm. workings prevents us from resuming operations in this part of the mine; but we will expedite the work as soon as possible, for the purpose of intersecting Labouchere's lode at this depth. The profitable stopes in the 5 fm. workings, at shaft No. 2, have been idle since the accident, which happened in the autumn of last year; we have, however, succeeded in getting some timber across the run, and hope to be able to commence rebuilding the shaft about the latter part of next month, and, shortly afterwards, the usual operations will be resumed. Both the 3 and 10 fm. levels are at present leaving reserves of good ore; and, without any unforeseen impediment, we hope to be able to keep up a regular and good return of ore throughout the winter. The Alton river has now begun to freeze; and the driving has, in consequence, been suspended until the winter fairly sets in, after which we expect to be able to make some good returns to the smelting-house.

United Mines.—No further change is to be noted here—the produce in ore will hereafter be less; but the quality will be found better than before. At Woodfall's, one of the old workings lately resumed on tribute, under the 35 fm. level, has improved, and will give profitable employment to a few hands throughout the winter. On Hoskins's lode, the operations have been irregular, and very little progress has as yet been made in exploring it. We shall employ as many tributers as possible on these lodes during the winter months.

Raper's has undergone no further deterioration; but, on the whole, the prospects are somewhat improved. I fear, however, that we shall be unable to increase the returns from this mine before next spring, when we shall be able to resume the usual surface work.

Mancu's.—The tribute workings have been rather more successful, and the produce of this month will experience a trifling increase. In the early part of next week we hope to be able to commence driving the water out of the old workings, and shall immediately afterwards resume the usual surface work.

Michell's continues to make fair returns; but I fear the winter will force us to suspend the surface workings, when we shall be obliged to resume others in the mine, but less profitable—and the produce must, in consequence, experience a corresponding decrease.

Every exertion shall be made on our part to keep up the usual supply of ore throughout the winter, when we hope to resume some of the old workings on Nelson's, and the north and south lodes.

Old Mine.—The tributers are still making fair returns, and the work performed leaves a remunerating profit.

Powder House.—The prospects are rather better, and the produce exceeds our expectations.

Coal John's.—The lode has latterly been irregular; but, on the whole, it has not deteriorated—neither do I expect to find any falling off in the present month's returns.

Wit's is again suspended for the winter, in consequence of the great expense attending the clearing of ice and snow in such a large extent of open excavations, and we have in consequence been able to collect some small parcels of ore at the surface.

We shall continue to employ as many hands as possible on these places, in the hope of being able to increase our stocks of ore at the smelting-house, prior to recommencing the smelting operations.

BOLANOS MINES.—(From a letter, dated September 18.)

BOLANOS TRANSPORT.—The business of the transport is proceeding as well as the unfavourable weather permits. Some parts of the engine are already at Salitre, from whence I hope to convey them to the Bote with carts up the country. Some of the heavier pieces of boiler, &c., are now at the foot of the Pinal; and, by next week, I hope the cylinder may also be got so far on its way. The rains have continued very abundant until within these few days; but now the weather has suddenly changed, and I hope the decision is set in. The teams have suffered greatly from the bad weather, and the impracticable nature of the roads; and I have been obliged to send a large number of fresh mules. If the present weather continues, and we meet with no serious accident, I hope to deliver the whole of the engine in Bote in November.

In SAN FRANCISCO DE PAULA MINE, the bottoms continue to yield the usual quality; but in the ends, driven a little below the fourth cross-cut, we have seen nothing to encourage us; and, if, after deepening the shaft, and examining the veins, at a greater depth, we do not meet with better fortune, I should consider the mine had a fair trial, and would advise its abandonment.

CELESTINA MINE.—The Mayrazo lode still continues to yield ore at the level of the Providencia, and a little above and below it; and we have also some traces of ore at the Guadalupe level, the deepest in the mine; but if the ore in Providencia should suddenly fail, we should have no resources to fall back upon, and the mine must soon cease to yield profit. We therefore, propose at once to drive a cross-cut from the end of Guadalupe, to examine the principal vein of Celestina again, much further to the west, and underneath some large open workings, which appear, in former times, to have yielded abundance of ore. The principal vein of Celestina, which has been worked out so extensively on the surface formerly, and which was the chief object for contracting the mine, has been but little examined by the company; and I think it well worthy of the trial which is proposed.

LORETO MINE.—In the shaft of San Ignacio, it appears, that the former owner must have sunk through the vein of Malacocha, cutting it at about 30 varas depth, without recognizing it; we have, therefore, some hopes from this lode, which has been so fruitless in the adjacent mines.

From a letter, dated October 18.—Everything belonging to the San José engine is now out of Bolanos—a considerable part of it at Salitre—and the heaviest pieces are still at the foot of the Pinal. As soon as these are conveyed to Bote, the cylinder will also be got so far on its way.

CELESTINA is again improving in the ends, after having fallen off considerably towards the end of September.

SAN FRANCISCO DE PAULA continues nearly the same as at the date of my last advices, with the exception of a slight improvement in the ends at the fourth level; the sudden rush of water, however, leaves no doubt that we are cutting a vein—the quality of which I hope to ascertain shortly.

In SAN IGNACIO, we have found the old workings rather more extensive than I was led to expect; but it appears pretty certain, that the main body of the Malacocha lode has not been explored in the lower levels; and, as this lode has been so extraordinarily productive in the neighbouring mine, I hope you will not disapprove of the small outlay required for its examination. Some stones of ore we have assayed as high as 32 marks per mouton; but we have not found anything of the kind, in situ.

IMPERIAL BRAZILIAN MINES.—Gongo Soco, Oct. 9.—I am sorry to say, Gongo Mine presents nothing new. The long continuance of dry weather has permitted us to remove the saw mill, half of which is already at Bananal. The continued drought still diminishes the water in our regos; we are, therefore, unable to drain the mine at

Banal. The adit is advancing rapidly, and, except a short and trivial interruption near Walker's shaft, it has gone through most favourable ground. Walker's shaft, with great speed; but as it gets below the level of the water in the large pit, and approaches our deep workings, it is rather wetter than it was upwards. We have made great progress in the pit of Walker's pumping wheel, and the foundation for the saw-mill will be ready during the ensuing 10 days. The kitchen is fit for use, though not yet quite complete, and our labourers' houses are getting into order very fast. Every exertion is being made to get an ample supply of timber on the mines, before the commencement of the rains, and we have, consequently, found it necessary to advance our carriers' wages a little. Every branch of the service continues to my entire and unserved satisfaction.—Gold workings from Gongo Soco, from 23d. September to 2d. October—4 lbs. 5 ozs.

PACHUCA MINES.—Oct. 23.—*Esperanza.*—The total depth of the San Guillermo shaft is about 32 varas below the 50 vara level; and, upon its reaching 30 varas, I propose to drive another cross-cut south, in order to test the south part, where a little ore was found in the 60. This, in my opinion, will be a very important trial, and, probably, might be done by the end of January. The 80 vara level, west of cross-cut, is producing stones of promising blue ore; the part of the lode in which it is found is about 3½ ft. wide, but not regular; the large stones of quartz are interspersed with spots of ore. In the first fortnight of the month 3 quintals were saved, that assayed 18 mcs.; and 16 quintals of 5 mcs.

Oct. 28.—By the report herewith forwarded, you will notice that the trial still going on in San Guillermo, in the 50 vara level west, on the south part of the vein, is one of a very promising description—I propose, therefore, devoting the funds in hand, and the proceeds of the small tortas, which will be bonafide before the end of the year, to the sinking of the shaft, and proving the lode at a greater depth.

REAL DEL MONTE MINES.—[Received 8th December, per *Fourth packet*.]—Extracts from a letter dated, *Mineral del Monte*, Oct. 28.—I beg to acknowledge the receipt of your dispatches of the 31st August, which came to hand on the 20th inst.

Since the completion of the network in San Pedro shaft, described in my last, we have resumed the sinking, which, if no further increase of the water takes place, we hope to complete to the proposed depth for a new level—say, 30 varas below the San Enrique. The San Enrique level, east of San Pedro, on Acosta vein, has lately cut a branch of the Santa Brigida, and, we calculate, is now within six or eight varas of the main body of that lode; the ground has continued hard, and the progress has, consequently, been rather slow. The water from this end has much increased, and a corresponding dislocation is observable in the *Avilador* level south, on the Santa Brigida, which we trust will soon be drained, and enable us to sink below it, on some good branches of smelting and azogue ore, which we have hitherto been prevented from working by the water. The labores above the *Avilador*, both on Acosta and Santa Brigida veins, are still producing a pretty deal of azogue, but little of the class for smelting.

Sacramento.—The San Isidro level, driving south of this shaft, is exploring a large piece of whole ground; the lode in the present end is of a promising description, and yielding a small quantity of azogue ore. The labor 240 varas north of shaft, below adit, contains this rock on the completion of the small one.

Moran.—I informed you, in my letter of last month, that we had resolved on the erection of a 19-inch cylinder engine on Santa Barbara shaft, about which all the artizans have since been busily engaged; and I have the satisfaction of stating, that in another week it will be completed. We now see the prudence of adopting this measure, as during the last three weeks, the two malacates have proved unequal to the drainages of the planes, and the raising of smelting ore has, consequently, fallen off. By means of the engine, the work will soon be remedied; and, I trust, for some months to come, we shall be enabled to raise, not only sufficient to cover the current expenses, but to cover the transaction, but to leave some profit. I stated in my last, that I proposed waiting for instructions from the directors, before proceeding to put up the 30-inch engine on Moran shaft; but the more I have thought on this subject, the more convinced I have become of the importance of not delaying it, as it is evident the small engine will render only a temporary assistance; and if the erection of the 30-inch engine be at once commenced, it will take, at least, four or five months to complete it; I have, therefore, arranged to commence the erection of the small one.

Rosario.—The principal labor in this mine, is that of San Rafael winze, sinking below San Miguel level, where there is a large ore lode, producing about 200 cargas per moun. The total quantity raised, during the last four weeks, amounted to 625 cargas—the ley, however, is rather low, as the average mine assay does not exceed 9 mcs. per mouton; and, from the hacienda, I do not expect more than 7 or 7½ mcs. Mr. Bowring, who has lately returned to Regla, has expressed a desire to have a torton from this mine, to be benefited by his process; and, as the trials hitherto made have appeared satisfactory, I propose to send down 40 or 50 moutones.

By the statement, herewith forwarded, you will perceive that the returns for September amounted to 56 bars, value \$66,823, and the expenditure to \$61,237, leaving a profit of \$5,586. The returns would have been more, had we obtained a supply of quicksilver, and the same cause will operate on the present month's returns, as the arrival of this article from Tampico was delayed a month beyond the time we expected; but as there is now such a large quantity of lamas on hand, we shall in a great measure make up the deficiency in the present quarter. Another thing has seriously operated against the present month—viz., the rains, which were incessant for about three weeks, and which prevented the charcoal burners from supplying that article for the fundaciones—the consequence was, that all the furnaces were idle for several days. I expect, nevertheless, to get about 50 bars, which will about meet the expenditure.

ST. JOHN DEL REY MINES.—*Morro Yello*, Sept. 26.—Gold extracted to date, 10,429 oits, from 441 34-100ths cubic feet of sand—23 6-10ths oits per cubic foot. Stamp working during 25 days, 66 heads. Supply of stone abundant.

Water.—You will see by my diary, that it has been finally determined to supply the additional water required at the highest horizon of the mine works, from the source described in my letter of the 13th inst., which will be connected with the Bananal rego. As the present season, however, is so far advanced, this work cannot be commenced till the beginning of the next dry season—say, towards the end of March, or early in April. Meantime, I have, for several weeks past, had a party of 12 or 13 labourers, under the direction of an Englishman, putting the various leats and regos into good repair, and supporting by timber the ground which appeared weak, or likely to give way; so that I indulge the hope, that we may get through the rainy season, without any serious mishap.

Mine.—Sinking is going on with spirit in the Gamba and Bahu; and I am happy to say, that the whole establishment is in a satisfactory state, notwithstanding some occasional disappointment in the mechanics' department.

From the Diary, Sept. 25.—William Trelair has finished his survey of the Chrystall's last water-course. It appears that the water can be had at a height of 17 feet above our hauling engine, but that would not afford sufficient pressure to send the water through our present pipes to the requisite height on the opposite side; it is, therefore, now determined to adopt the plan referred to in my letter of the 18th inst.—to increase the supply per Bananal rego, and this useful work will be commenced at the close of the approaching rainy season—say, about the beginning of April next.

UNITED MEXICAN MINES.—*Guantanamo*, Sept. 26.—*Mine of Rajas.*—I have now the satisfaction of reporting some improvement in this mine. The working of Santo Toribio, which I announced in my last, as presenting a more favourable appearance, has, for the last week or two, produced us about 100 cargas per week, though of a ley lower than was expected; and, from its present appearance, we have reason to expect that this produce will continue, and we have cause, likewise, to hope for a higher ley—it does not at present exceed 11 mcs. or 12 mcs. of silver, with a high ley of gold. This increase of produce, the amount of which you will observe in the annexed statement, has enabled me to put six arrastres in the hacienda of Barrera, at work upon Rayas ores, the number so employed being 36. The half sales for the last five weeks also show an increase—so that, upon the whole, our hopes are somewhat reviving, although the expenses of the mine continue heavy, owing to the high price of forage, and the increased charges we have to sustain, in preparing and ventilating the working of Santo Toribio. I have no alteration to mention in any other part of the mine.

Statement of the Working of Santo Toribio.

Weeks ending	Picked ores	Half Sales.	Outlay.	Excess of Outlay.
August 14	Cgs. 1564	5 6076 6 4	22,483 0 7	\$14,466 1 6
Sept. 13	1549	5 6940 5 0	22,062 3 7	15,121 6 7
Cargas 445	\$863 6 4	\$1,579 3 5	\$715 1 0 7	

Increase. **Decrease.** **Excess.** **Decrease.**

Weeks ending	Picked Ores.	Half Sales.	Outlay.	Excess of outlay.
Sept. 18	Cgs. 1634	5 5611 5 4	18,113 6 7	\$12,507 1 3
Oct. 16	1800	5 5496 7 0	20,416 3 4	14,929 4 4
Cgs. 165	\$124 6 4	\$2,297 5 5	\$2,422 4 1	

Quicksilver.—As I have heard nothing of the 150 bottles, shipped per *Toribio*, in July last, I have been obliged to purchase about 30 bottles for immediate use.

Notes.—Our dispatches are imperfect, as the usual accounts and statements only come down to the 25th September, and are, therefore, a month in arrears.

London, Dec. 8.

Report on the State of the Workings of the Mine of Rajas.

Sept. 23.—La Paraisa.—A small quantity of ore is extracted from this side of the mine, on hacienda account.

San Lorenzo.—The bunches of ore referred to in last month's report, as being found against the upper part of these old workings, having apparently been all extracted, the workmen have been employed latterly in a higher part of this division of the mine, in throwing down a fair quantity of common ore, which contains some small bunches of better quality. This point has afforded an increased produce of ore, but its duration is rather limited. There has also been an increased extraction from San Pio, where at pre-

JOHN MATTHEW, Sec.

sent there is some facility in breaking down the ore. Eight pairs of horses are now employed by day, and three pairs at night; three pairs are still employed by day only, in the roof of San Juan; and, although the ore here is rather scarce, they are of fair quality.

San Cayetano.—The workmen have been removed from the Pozo Grande, in consequence of the almost entire failure of the ore. In the lower part of San Cayetano nothing has been done towards continuing the dry walls, in consequence of the scarcity of the builders and their assistants.

Santa Cecilia.—Since the last report, 2,313 vases have been driven in this cross-cut, without any particular alteration in the character of the lode having shown itself. Some slight appearances of ore occasionally present themselves in the bands of quartz that are cut through.

San Miguel.—The pit of Inocentes has been communicated on the north-west side, with an old working filled with rubbish, the work is being pursued by carrying down the pit on the south-east side, where some rich threads of ore are found. The other two points hitherto worked have been suspended on hacienda account, and given to the buscones. Four pairs of horses are employed in Inocentes by day, and an equal number by night. **Santa Floridia.**—The pit has been opened out of the south-east side, whilst it has also been carried down on the inclination of the lode. An end is being opened on the south-east side, which will be a continuation of the original level. In the advanced part of the pit another end south-east (San Miguel) has been commenced, and the roof (La Merced) is also being followed up. In the pit, and end (San Miguel), the bands of ore are found more ramified than at a higher point, and the amount of lode to be extracted is, in consequence, very considerable, owing to the one band being close against the lower, and the other close against the upper part of the pit. The extraction of the rubbish, therefore, continues to be expensive. In the upper end (Santa Floridia) and roof the bands of ore are found approaching each other nearer than in the pit, and the general produce from these upper points is superior to the others, both in quantity and quality. A gradual increase has taken place in the produce of ore since the commencement of the working, and the extraction last week reached 140 cargas asogue, and 40 cargas terraz. Fourteen pairs of horses are now employed by day, and an equal number by night. Five pairs of horses are also employed by night only, in improving the road leading to Santa Floridia, so as to ensure good ventilation; and a short work of communication is being driven between the despacho of the shaft and the road, to facilitate the conveyance of the ore to the shaft. The water in the bottom of the mine has risen above the point it reached last year, and still continues to rise. A slight improvement has again taken place in the sales of ore, on joint account with buscones, owing to some fair ores having been found in some of the campos situated in San Antonio, towards the south-east side of the mines. The increase in hacienda ore is attributable to Santa Toribio and San Pío. —G. R. GLENNE.

MINES OF CERRO DEL BOTE, IN MEXICO.

The following is an extract of a letter from a gentleman in Zacatecas, dated Sept. 18, 1847:—"In the course of my journeyings in Mexico, I have recently arrived in Zacatecas, and have been much interested in a visit to the mines of the Cerro del Bote, which bid fair to equal the most celebrated of the Mexican mines. They are situated about a league from this place, and are worked by the English company, which still bears the title of the Bolanos Mining Company, although the old mines of that name have long since been abandoned by them. By means of an introduction to Mr. Placci, the director of the mines, I was able to form a comprehensive idea of their extent and value. I was particularly struck with the number and great size of the silver veins which are comprised within the 'pertenencias,' as the spaces of mining ground are called in Mexico. The three principal veins are the Valenciana, San Jorge, and San Elijo. Their 'crestones' can be traced along the brow of the hill, or cerro, for a considerable distance. It is very curious to follow the line of the veins at surface. One of them is a continuation of the great Cantera vein, which crosses the 'Bufa' of Zacatecas, and was formerly enormously productive in the mine of Cuadrilla, which lies between Zacatecas and Cerro del Bote. The extraction of silver ore from that mine amounted to 7000 cargas (500 lbs. each) per week, and enriched both the owners and the city. Large as this quantity may appear, there is reason to believe, that the Bote Mines may yield ore in still greater abundance, as the present extraction, from a very shallow and limited working, amounts to 3000 cargas per week; and I was informed, that the profit is equal to 3000l. per month. In order that you may understand more clearly the grounds upon which the expectation of much larger returns is based, I will describe the workings, although very briefly, as I have many more things to write to you about. The operations were commenced some 12 years ago, by sinking a shaft from the surface, and driving a level from it, at 35 varas deep, passing into the hill, intersected four or five veins—three of which are of very large size, but unproductive of silver at this level; one of the smaller ones being an exception, which afforded some assistance. The sinking of the shaft was continued, and another level driven, at 110 varas from the surface, at which depth the first vein intersected, called the San Elijo, was found very rich. Since then, the levels have been driven upon the course of the vein for more than 150 varas—many parts being six varas wide, yielding ore of good quality, and producing, as I have said, 3000 cargas per week. As soon as a greater depth is attained, the drainage rendered effective (for which purpose a steam-engine is to be employed), and new levels opened upon this, and the other great veins, which have not yet been touched, the extraction of ore will, it is expected, be enormously increased. At present, some difficulty is experienced in 'beneficiating' all the ore that can be obtained, and Mr. Placci proposes, in consequence, to enlarge the hacienda of Cinco Señores, an establishment very conveniently situated near to the mines, and where the ores are 'beneficiated' by the process of amalgamation, commonly in use in Mexico, which is very well described in a pamphlet I have recently met with, published in London, by Mr. Phillips, of the Real del Monte Association. It is wonderful to see the changes caused in a short space of time by a productive mine. On this spot, where, as I was informed, nothing presented itself to the view a few years ago, but a line of barren hills, with here and there a stunted palm, or prickly pear, there is now to be seen an extensive establishment, comprising erections in the shape of workshops, storehouses, and dwellings, stabling and yards, and all the other adjuncts of a large mining concern, testifying with life and activity—evinced signs of a prosperous state of things, and contrasting most pleasingly with those mining establishments which I have seen fallen into decay. Of the Cerro del Bote, it is not too much, I think, to say, that it has the essentials of great and lasting productiveness, and, fairly managed, ought to give large profits.

"What a fine country is this Mexico! From north to south, east to west, such a remarkable variety of products—so many resources, which, in the hands of a more energetic people, would be brought into action! But it seems doomed to misère. Only recently, this city of Zacatecas, governed by a man totally unfit for so responsible a post, has witnessed this self-same governor imposing taxes on foreigners, contrary to the laws, and breaking into their houses, because they refused to comply with his illegal exactions. The sufferers, however, intend to represent the matter to the British Government; but whether they will obtain redress, is another question."—September 18, 1847.

THE COST-BOOK SYSTEM.

"X. Y. Z." (Isle of Man) wishes to know (under the Cost-book Principle):—1. To what amount shareholders can be called upon to respond in the way of calls at one time, and when the same may be considered due?—2. Whether the financial committee presuming therefrom (there being no directors) have power of themselves to alter, vary, and determine upon, any of the rules, &c., entered into at a general meeting of the shareholders?—3. What steps are necessary to compel an adventurer to pay up his calls, he having neglected to do so, in accordance with the 21st clause?—4. When the prospectus states that this 'principle' will be strictly adhered to in the operations of the company, and it prove otherwise, are the proceedings void in consequence?—5. Whether the cost-book itself comprise a certain number of rules and regulations clearly and distinctly defined; and, if so, where are they to be met with?

[Although the term "Cost-book System" implies one well-defined plan for the regulation of all mining undertakings, the adventurers in which propose to be guided by its adoption—and, although originally, and until within the last half century, in the custom of the county its details were, doubtless, well understood—innovations have crept in, points of law have been mooted, and what is termed the "Cost-book System" may now be found in operation in different mining companies, under very different circumstances, and each code of laws wearing very different aspects. Under such circumstances, it is difficult to give an unqualified reply to the numerous queries which we have addressed to us on the subject; we will, however, answer our correspondent's queries to the best of our ability. To the first query, we answer that no call can be made, but at a public meeting of the adventurers; we apprehend the shareholders are liable for any amount of call so made, and it is to be considered due at the date fixed upon, at the time of making such call, sometimes "payable forthwith," and, on other occasions, at some future day named. To the second query we should say, that the financial committee have no power of themselves to make, alter, or change, any of the rules and regulations as once entered in the cost-book; power may be delegated to them by the shareholders at a general meeting, to use their own discretion in the strict administration of those rules, when it may appear, for the interests of the undertaking, that they should be invested with such power. Thirdly—On an adventurer refusing, or neglecting, to pay up his calls, the committee of management are empowered, by the clause in the cost-book, to forfeit his shares, subject to confirmation at a general meeting; or any creditor on the mine can sue such defaulter for goods supplied to the mine—a mode of procedure generally productive of the most summary results; under such circumstances, all that is necessary is, for the pursuer to supply the name, &c., of the defaulter to the merchant who is willing to sue him. The pursuer also has a good action against a defaulter in the Stannaries Court. Fourthly—The mode of conducting a mine on the Cost-book System, is based on the rules and regulations entered in the cost-book at the first meeting of adventurers, totally irrespective of any prospectus which may have been previously circulated; it being, of course, assumed that every holder is a party to the resolutions passed at such first meeting. Lastly—Our introductory observations apply to this query—we do not think there is any strictly defined system, which, in all its details, must be adopted by a company, professing to be conducted under the "Cost-book System;" one general principle guides all, but the regulations and bye-laws differ according to circumstances. The only information, that we are aware of, being published on this subject, are the numerous communications in the Mining Journal during

the past few years, which enters very fully into it; and the numerous decisions in the several equity courts, which we have always published. For a general exposition of the Cost-book System, we refer our readers to an article in the Mining Journal, of the 19th of June last.

CARADON CONSOLS.

Sir,—As this mine has been "knocked" for a long time, and the materials have been sold many months ago to the South Caradon Company, it is high time to hear something of the dividend which the unfortunate shareholders may expect. Money being now so scarce, and Christmas being the time when tradesmen expect their bills to be paid, it is extremely desirable that the managers should not delay the settlement of the affair beyond that period. They would deserve, and would, doubtless, secure, the thanks of the company by a speedy winding-up.—A SHAREHOLDER: Chester, Dec. 7.

WHEEL ANDREW AND NANGILES MINING COMPANY.

Sir,—When an individual speaks of the property of a public company, it is imperative on him, if he has any respect for that good faith, upon the due observance of which the very existence of our commercial system depends, to use all means at his command to ascertain the correctness of any report, that may have an injurious tendency towards the interests of such company, before giving it publicity. Your correspondent, "An Adventurer," in Andrew and Nangiles, appears to have adopted a contrary course—in forwarding for insertion in your columns, immediately on its receipt, or without further inquiry, a report of the above nature, not only false, but absolutely without foundation. I take it for granted, that your correspondent is, as he subscribes himself, "An Adventurer" (as it would not be in accordance with your usual care to have omitted satisfying yourself on this point, before giving such a report currency); and, therefore, I suppose his motive to have been, to obtain a more efficient management for the future. Such a proceeding cannot, however, be too strongly reprehended. If "An Adventurer" had observed, on the part of the managing agent, anything whereon to found such charges, as those contained in his communication to you, his proper course would have been to have laid such before a meeting of the shareholders, and there to have substantiated them; and if they had not been satisfactorily met, or have failed to effect the desired change, he would then have been justified in publishing a report of the meeting, with his comments thereon. This would have been more likely to remedy the evil, had any existed, and would have saved him the unpleasant reflection, of having made an erroneous statement, tending to the injury of his own interest as well as that of his copartners. In conclusion, I may observe that I have long watched the management and progress of this undertaking, and am convinced, from my personal knowledge of the managing agent, and many of the parties connected with it, as well as from my own observations, that if all our mines were conducted with the same integrity, ability, and regard to economy, it would save mining speculators from the greater part of those evils, the existence of which they have so often to deplore. HUBERT B. RYE. 80, Old Broad-street, Dec. 9.

WHEEL BARBARA AND CASCADE MINES.

Sir,—The letter of Mr. Truscott, which appears in your paper of the 27th Nov., in reference to these mines, contains statements so utterly devoid of truth, that I cannot, in fairness to the public and myself, abstain from replying to it. I am a holder of 45 shares in the above mines, as Mr. Truscott is very well aware—he being fully cognizant of the circumstances under which they were assigned to me, and having himself offered me 10s. per share for Cascades, and 20s. per share for Wheel Barbars. The certificates and assignments to me may be seen at Mr. Treney's, Threadneedle-street.—2. Mr. Truscott (whether it be his duty or no) does interfere with prices, else why does he notice my last letter to you instead of Mr. Taunton, the secretary, whose duty it appears to me to be, and who is as fully aware of all the circumstances connected with my holding, as Mr. Truscott himself?—3. My "notice" is apparent; it is to disabuse the public, and sell the shares which I hold, at the best price I can get for them; and if any one is inclined to give me the price specified in the advertisement sent herewith for insertion, I will accept the offer, and the purchaser will, of course, not pay his money until I show a perfect title. So much for my possessing no title.—HEINRICH FISCHER: 6, Lincoln's-Inn-Fields, Dec. 8.

BEDFORD UNITED MINING COMPANY.

At a special general meeting of shareholders, held at the offices, Old Broad-street, on Thursday, the 9th inst.—JOHN BROWN, Esq., in the chair—the notice convening the meeting having been read, it was resolved,—That the present rules and regulations, for the government of the company, be rescinded, and that the affairs of the company be in future conducted on the Cost-book System.—That a committee of management, consisting of the late directors of the company, be appointed, for conducting its affairs, till the next general meeting of shareholders.—That the shareholders be requested to deliver their scrip at the office, and sign the cost-book, when they will receive an acknowledgment for the amount of scrip deposited, certifying their holding in the mine.—That transfers in future be made in the usual way, in accordance with the mode in use on the Cost-book System.—A vote of thanks having been passed to the late directors for their services, and to the chairman, for his able conduct in the chair, the meeting separated. It appeared, that the funds in hand, including profit to the end of Oct., amounted to 2201l. 5s. 3d.—that the estimated profit for Nov. would be between 400l. and 500l., and the mine still continuing to look well.

MARKE VALLEY CONSOLS MINING COMPANY.

A meeting of adventurers was held at the White Hart Hotel, Salisbury, on Wednesday, the 1st inst.—WILLIAM FAWCETT, Esq., was requested to take the chair, and who, in a very clear and comprehensive manner, explained the reasons which induced the directors to convene the present meeting, and then called on Mr. HARDING (the secretary) to read the notice, and the reports which had been drawn up for the information of the shareholders at large. The directors have great satisfaction in meeting the shareholders at a period when they are enabled to report, that for the first time, after nearly nine years perseverance and outlay, the mine is more than paying its own cost. With the view of placing before the adventurers a complete statement of the present condition of the mine, the directors have caused the attendance of their agent, who has prepared his report of the workings up to Saturday last, and who will give all necessary explanations relative thereto.—Capt. Seccombe's report was then read, as follows:—"In compliance with your instructions, I beg to hand you the following report of the operations since the 6th April last, and the present appearances of the mine:—In the 80 fm. level the cross-cut has been extended 4 fms. 1 ft. 9 in., at which point Marke's lode was intersected, and we have driven east on its course 25 fms. 2 in.; the lode at present is 20 in. wide, composed of quartz and fluor, with spots of copper ore; we have also driven west on the same lode, in this level, 15 fms. 1 ft. 11 in.; in the present end the lode is about 2 ft. wide, composed of quartz, prill, mudie, and rich stones of copper ore; the ground continues favourable for driving, and contains good indications of an early improvement. In the 45 fm. level we have driven east on the south part of Sarum lode, 4 fms. 5 ft.; I then considered it advisable to cross-cut north, and, after driving about 3 ft., we intersected a course of ore; since which we have driven west 1 fm. 5 ft.; the lode in this end is about 10 ft. wide, and will produce from 8 to 10 tons of ore per fm.; the driving is now discontinued, until a communication is made by Fearon's winze to this level; we have also driven east from the cross-cut about 7 fms. 5 ft., on a course of ore, 12 ft. wide, which has yielded upwards of 20 tons of ore per fm.; the lode in the present end continues to be 12 ft. wide, and will produce about the same quantity of ore—that is, 20 tons per fm.; we have also stoned 5 fms. 1 ft. 3 in. in the back of this level, which has produced above 100 tons of ore, and the lode continues without any visible alteration. The sinking of Fearon's winze, below the 15 fm. level, has been resumed, and sunk 8 fms. 0 ft. 2 in.; there remains 5 fms. more to sink to reach the 65 fm. level; the position of the lode carried in the winze is about 6 ft. wide, and will produce about 5 tons of ore per fm.; there is about 7 fms. to drive east in the 65 fm. level, to get under this ore, and I fully calculate that this will prove to be one and the same course of ore. We sampled at Calstock, on Friday last, 293 tons of ore; this shows a great increase over the last sampling, and I fully calculate on having 300 tons for the next two months' sale; and, from the encouraging appearances of the lode, so far as laid open, I am fully persuaded that we shall have a rich and lasting mine.—The liabilities of every description, up to the 1st of December, including the cost for Nov., and the carriage of ore last sampled (293 tons), amount to 1238l. 2s. 2d. The assets in cash and ore bills not yet due amount to 2138l. 8s. 6d., which shows a balance in favour of the company of 899l. 6s. 4d. This statement, together with the reports, gave general satisfaction.—A vote of thanks to the directors was proposed by Mr. SQUARISH, who observed, that this was not an idle compliment, for all must be convinced that they were indebted to the great and grauitous exertions of those gentlemen, for the present prosperous position of the mine.—The vote of thanks being unanimously carried, and responded to by the CHAIRMAN, the meeting separated.

CALLINGTON.—The following is a statement of accounts for the three months ended Sept. last:—viz. To July, August, and September cost, 5976l. 9s. 4d.; discount and interest, 30l. 15s. 3d.; directors and London management, 112l. 10s.; sixth dividend, 1000l.; reserve fund, 100l.—together, 7218l. 14s. 7d.—By silver-lead ore sold, 5945l. 9s. 7d.; from Kelly Bray copper ore, 669l. 9s. 6d.; silver, 81l. 16s. 9d.; balance at last account, 870l. 16s. 3d.—7517l. 12s. 1d.; leaving balance in favour of adventurers, 298l. 17s. 6d.; to which add, subist, 259l.; 40 tons copper ore (say) 240l.; old iron, 12l.; makes a balance of 809l. 17s. 6d., in addition to which the reserve fund amounts to 610l. 19s. 6d.

HARROWBARROW OLD MINE.—A quarterly meeting of adventurers was held at the Globe Hotel, Plymouth, on Thursday, the 2d inst., when the pursuer's accounts to that date were examined and allowed; the resignation of the pursuer was accepted—a full release and indemnity to be given him on his giving up the books and papers. A call of 30s. per share was made; an indemnity given

to the committee going out of office; and Messrs. Prior, Atkinson, Carne, Willan, Hainsell, Vigurs, and Partridge, chosen the committee for the ensuing year.—In consideration of the unanimous wish of the London shareholders the disposal of the further business of the meeting was adjourned to Thursday, the 9th inst., at the same place.

BUDNICK CONSOLS.—At the usual two-monthly meeting, held on the mine, on Monday last, the following statement of accounts was allowed:—To balance at last account, 139l. 0s. 10d.; costs, &c., for Sept. and Oct., 1192l. 7s. 4d.—1325l. 8s. 2d.—By ore sold (less dues), 885l. 7s. 7d.; carriage of tin, 15l. 7s. 9d.—900l. 18s. 4d.—Balance against adventurers, 424l. 12s. 10d.

EAST WHEEL AGAR.—A meeting of shareholders in this mine, which is in St. Cleer, was held at Lostwithiel, on the 29th of November, when the accounts to the end of September—showing a balance of 8l. 18s. 5d. in favour of the adventurers were examined and passed, and a call of 1l. 10s. per 128th share ordered.

WHEAL BREWER.—A meeting of adventurers took place at the mine on Tuesday last, at which the accounts, from Aug. to Oct. inclusive, were submitted, and passed, as follows, and a dividend of 1l. per share declared:—By balance at last account, 91l. 7s. 7d.; ore sold (less dues), 1310l. 7s. 6d.—1401l. 15s. 1d.—To costs, &c., 1176l. 10s. 10d.; dividend of 1l. per share, 120l.—1296l. 10s. 10d.—Balance in pursuer's hands, 105l. 4s. 8d.

WHEAL LOVELL.—At a meeting of shareholders, held at the mine, on Friday inst., the accounts, of which the following is an abstract, were allowed:—To balance at the end of June, 5208l. 15s. 7d.; costs, &c., for July, August, and September, 3178l. 18s. 9d.—8387l. 9s. 4d.—By received on calls, 412l. 10s.; ore sold (less dues), 3678l. 2s. 11d.—4090l. 12s. 11d.—leaving a balance against the adventurers of 4291l. 16s. 6d.

MARY CONSOLS.—At a two-monthly meeting, held at the mine, on the 7th inst., the accounts were examined and passed, showing balance from last account, 156l. 19s. 3d.; costs, September and October, 422l. 7s. 6d.; merchants' bills, 58l. 18s. 2d.—638l. 4s. 11d.—By calls, 236l. 5s.; ore sold, 474l. 16s. 7d.—711l. 1s. 7d.—leaving balance in favour of adventurers of 72l. 16s. 8d.—It was resolved, that Capt. W. Goss be appointed first captain of the mine, pro tem., in consequence of Capt. Martyn having broken his leg; and that Capt. Gilbert be continued as dressing captain, with an addition of 1l. per month to his salary, for assisting in keeping the accounts; Capt. Goss to be allowed 5l. 6s. per month; that the captain's report be printed and circulated among the shareholders; that the thanks of the meeting be given to the committee of management, and that Admiral Tremlett, Captains Bulkeley and Hambly, and Messrs. Rendle and Foy, be the committee for the next two months. The following report from Capt. Goss was read to the meeting:—"The engine-shaft is down 11 fms. below the 12 fm. level, and we intend to sink 2 fms. more before we drive again. We shall leave 1 fm. fork, and commence cutting a pit for a 36 fm. level, in about a month from this time. The lode at present in the engine-shaft has a leader of solid ore, from 2 feet to 2½ feet wide, and the lode producing saving work the whole width of the shaft—worth 35l. to 40l. per fm. The pitch in the adit level is much the same as before. The pitches in the back of the 12 fm. level are rather improved; the pitch in the bottom of this level is looking very promising, and has improved the last few days—the lode having increased in size, with a good branch of ore in it. We sent away about 24 tons of ore last week, towards our next sampling, which will be about 80 tons, to be sampled by the 20th or 21st of the month."

WHEAL ASH.—At an adjourned meeting of adventurers, held at Plymouth, on Wednesday, the 1st inst., it was resolved, that the accounts to the end of October be allowed and passed; that a call of 1l. per share be made, one-half payable on the 30th inst., and the remainder on the 1st Feb., 1848; and that the captain's report be printed, and circulated among the shareholders, previously to the general meeting.—The following report from Capt. Edwards, was read to the meeting:—"The eastern engine-shaft has been sunk to a level with the deep adit, a depth of 35 fms.; and in driving the cross-cuts to intersect the north and south lodes, the water increased to a very great extent, and the whole having to be lifted to surface, the engine could not keep it off—therefore, we were obliged to suspend the prosecution of this part of the mine until the adit unwaters the shaft, when the further development of this part of the sett, which has a very promising appearance, will be resumed. In bringing up the deep adit, the north lode has been intersected, not far to the east of the eastern boundary of Wheal Anderton, where its appearance gives us reason to expect ore shortly; it is about from 3½ ft. to 4½ ft. wide, with two well defined walls, and is composed chiefly of mudie, with a little gossan, peach, and spots of ore; upwards of 20 fms. have been driven on this lode, and the same character is maintained throughout, there being a course of mudie from 3 ft. to 4 ft. wide, nearly solid, with an underlay north, of about 1 ft. in a fm.; not being able to keep the water at the eastern shaft, where we had 35 fms. to lift it, we have removed the pump-work to a shaft on this (the north) lode, for the purpose of sinking below the adit in this course of mudie, and we are not likely to sink far before we have a good course of ore; for I never saw a lode of mudie like this laid open, that did not make a course of ore; the shaft is now 4 fms. below the adit, and the lode better than I have ever before seen it."

GENERAL MINING COMPANY FOR IRELAND.—The fourth half-yearly meeting of this company was held at their board-room, Burgh Quay, Dublin, on Monday, the 6th inst., at which Sir JAMES MURRAY (chairman of the board) presided.—The report of the directors, setting forth the operations of the company for the previous six months, was read, which appeared to be satisfactory to the proprietors. Amongst other matters, the report stated that the operations of the company at the present time provided for the large number of 1014 persons in the immediate neighbourhood of the mines, in the county of Tipperary; and that they have been distributing to their workpeople three tons of meal per week at first cost cash price. After the transaction of some routine business, thanks were voted to the chairman and directors, for the zeal and ability with which they had carried on the company's affairs during a period of such unparalleled distress.

NEWLAN IN PYDHAR.—The mining interest in this and the adjoining parishes is, at present, much depressed. A great number of the smaller mines have suspended operations altogether, and the larger ones are reducing their establishments. The great fall in the price of lead, has, doubtless, had an injurious effect; but, independently of this, the pressure of the money market, and the gloomy prospects of all mercantile speculations, have been felt here as elsewhere.—Plymouth Journal.

WHEAL ANDERTON.—Among the mines in our neighbourhood, we may mention that Wheal Anderton, near Tavistock, is now likely to pay back to the persevering shareholders, and their indefatigable captain (Carpenter), who holds a considerable interest in the concern, a very handsome return for their outlay. On Saturday last nine pitches were set on tribute at different prices—viz. 2s. 3d., 3s., 5s., 6d., 5s., 6s., 6s., 7s., 7s., in the 1l.—besides driving ends in the 70 and 60 fms. levels, at low prices, with 1s. tribute, on the ore raised on driving. Two or three pitches more are to be set this week; 20 heads of stamps are now at work constantly. There is a new drawing and stamping-engine just erected, which went to work last week.—Plymouth Journal.

PETRIED HUMAN BODY IN A COLLIERY.—We have been informed, that there has been discovered in a coal-pit, near Edinburgh, at a depth of from 20 to 30 fms., a petrified human body, which, unfortunately, the miners broke; but three pieces have been preserved—portions of the arms, and a foot and a leg, half-way up to the knee, the toes broken off.

THE MEXICAN PACKET.—The Forth, Royal West India Mail Company's steam-ship, arrived at Southampton, on Tuesday night, with the usual mails and despatches: her latest dates are—Tampico, October 25; Honduras, 20; Chagres, 26; Cartagena, 28; Vera Cruz, November 8; Demerara, 3; Trinidad, 5; Barbadoes, 8; Jamaica, 8; Grenada, 10; St. Thomas's, 15; and Bermuda, 21. The freights consist of \$125,810 and 53 cents, on merchants' account; \$182,509 8 cents in gold; silver in bars, valued, as per bill of lading, 621l. 17s. 4d. in British coin; 40 serons of cochineal, 3 ditto of barilla, 1 box of pearls, 1 case of tortoise-shell, 54 lbs. 9½ ozs. of platinum, 1 seron of bark, 79 cases of cigars, each containing about 10,000; 5 bales of bark, 316 lbs. 8 ozs. of gold, 108 lbs. 9 ozs. of silver, besides a variety of other packages of value.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Dec. 4, was 15,319; amount of money, £63 16s. 7d.

ACCIDENTS.—[Continued from page 583.]

Frightful Accident.—A shocking occurrence happened on Wednesday last, at Mr. James Hardcastle's colliery, at Harwood, near Bolton, by which two men, Smith and Turner, were killed, and J. Ball, W. Collier, J. Entwistle, and T. Ball, were seriously injured. They were descending the pit, when the rope broke, and were all precipitated to the bottom. How fearful is the contemplation of these frightful events, under a knowledge that they might be obviated by the adoption of the mechanical contrivance of Messrs. Fouldrinar, described in the Journal a short time since. A desire to serve their fellow men, ought to urge those gentlemen in their endeavours to get their invention adopted.

Pitfall at Dysart.—In another column, we have recorded an accident at Dysart, by the falling in of a pit; we have just learned, that the men have, through the exertions of Mr. Watt, of Dysart, and his hands, been got out, but all dead and fearfully crushed. The pit was worked by the Carron Company.

Serious Accident to Capt. Martyn, of Tavy Consols.—On Wednesday last, as Capt. Martyn, the agent of Tavy Consols was riding through Tavistock, his horse shied and ran against a cart wheel, and thus jammed his rider's leg so severely as to fracture the leg bone. Capt. Martyn has since been confined to his bed, but we understand that he is now doing well.—Plymouth Journal.

Blackwater.—W. Holman, on leaving a beer-shop, near midnight, fell into an old shaft of the Pynce Coburg Mine, abandoned 24 years since, and was killed. When will proprietors be compelled to secure abandoned shafts? It would appear as if they were willing to let a pitfall catch the unwary.

Plymouth Levels.—Two men were severely hurt by an explosion of gas.

Nant-y-glo.—Eleven persons suffered here from inhaling carbonic acid gas, of whom eight died, and the other three were recovered—among the deceased, were a father and two sons, named Parkes.

NOTICES TO CORRESPONDENTS.

It will at all times be much trouble, and frequently considerable delay, if communications are simply directed—
TO THE EDITOR.

Mining Journal Office,
25, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

* We should feel obliged to all persons, capitalists, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

* A Subscriber can obtain the works he requires of Mr. W. L. 25, High Holborn.

* A Mining Adventurer (Douglas) will find the information on the Cost-book System in another column.

LIFE ASSURANCE.—We have received a long letter from Mr. A. Burt, repudiating the pretensions of Mr. R. Bullen (late secretary of the Tontine Life Assurance Company), as being the originator of the system of life assurance for the working classes. From our own knowledge, we can assert, that Mr. Burt was engaged maturing his plans long previous to his introduction to Mr. Bullen; and which plans were also submitted to Mr. Ansell, the actuary to the Atlas Life Assurance Company, who computed the tables, anterior to their adoption, as the "People's Branch" of the Tontine Company, where, we believe, Mr. Bullen became acquainted with them—consequently, his assertions, in his paper, "Life Assurance for the Masses," published in the *National*, are not based on fact, and are calculated to mislead the public, as to the originator of one of the most useful extensions of the system of life assurance.

AIR GAGE.—The correspondent who inquired, in our last, for the sketch of an air gage, is referred to the description of Mr. Braham's Anemometer, in the *Mining Journal* of the 23d May, 1846.

"Terminus" (Durham).—We contemplate publishing a more detailed report of the matter referred to, early in next year.

"H. V." (Exeter).—The first paragraph in his letter is unintelligible; he does not name the mine in which he bought six shares for 200*l.*, &c., and, therefore, we cannot quote the price. The others mentioned have been attended to, and compared with London prices; but we cannot quote his figures, business having been done here at the prices given in our list.

"W. A."—On the Ventilation of Mines, shall appear in next Journal.

Received—"G. A." (Paris).

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The *MINING JOURNAL* is published at about Eleven o'clock on Saturday morning, at the office, 25, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

Glossary of Mining Terms.

In the month of January next, we intend publishing, as a Supplement, AN ENTIRE GLOSSARY OF ENGLISH AND FOREIGN MINING TERMS.—Subscribers and others wishing for copies of the Number, had better forward their orders, through their agents, to prevent disappointment: the charge for the Journal and Supplement will be Sixpence.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, DECEMBER 11, 1847.

Throughout the week which is just concluded, we have enjoyed a happy exemption from that excitement, which had recently spread itself through all the commercial circles of the kingdom. We have had a season of rest, by which the mercantile genius of the community will be inspired with fresh confidence, and its energies recruited with additional strength. Besides the advantages of this hopeful repose, there are several new circumstances which increase the amount of our satisfaction. First, the well-sustained influx of the precious metals into the bosom of the metropolis—the consequent ease and relaxation of that tightened bowstring, the money market—and the comparative facility with which accommodation can be obtained: the lowering of the Bank of England discounts to 6 per cent., and the prospect that, before New Year's day, the price of money will be lower still: add to this a gradual climbing up of the public funds—Consols, which in the last days of October were 79, are now at 86, and at that price very stiff, and still moving up—that is, as a whole, money cheapening, the public securities improving, and the great bullion depository of the empire again growing plenteous. If this were some of the last scenes of a pastoral drama, we should think it an appropriate time to introduce the chorus, with one of the voices saying—the winter is over, the valleys and the hill side are filling with fruits and pasturage, and the time of the singing of birds is at hand. But increased ease is not increased wealth; what the last few weeks have been chiefly doing for us, was to place our capital in an accessible and a visible situation. There is less room now for the relaxation of our efforts, as a working people, than ever—the clink of our hammers must still be heard ringing through the land—the motion of our looms and shuttles must still be the great domestic spectacle we present to the world—our merchant flags must continue to flutter in, and to ride through, every breeze—our keels furrowing every sea—this is necessary to meet the multitude of our annual obligations to pay; and further necessary, that we may keep our place as the great merchant nation of the world, and fulfil our mission as the chief civilising power of the age. We are bold to say, that we should give all, and more, than the usual attention to the increase of our mining produce; among the crowd of other duties, and the claims of other branches of industry, there is none more worthy of fostering care and diligent cultivation of its resources than this—the inquiries for shares, in this species of investment, have been numerous during the last few days. We can hardly, perhaps, expect a full trade and an enlarged activity in mining shares, till after the payment of the next dividends at the Bank; but, certainly, that class of symptoms, which usually foreshows the immediate elevation of mining property, is, at this moment, decidedly in the ascendant.

In the *MINING JOURNAL* of the 6th ult., we laid before our readers, to the extent which our means of information enabled us, the exact position of the SWANSEA DOCK COMPANY—more particularly to the relative bearing of the two boards of directors—the London and the Swansea—now, unfortunately, placed in antagonism with each other—a situation which must prove highly detrimental to the interests of the shareholders at large, and to the proper development of the works. On Thursday week an extraordinary meeting of proprietors was held at Swansea—the resolutions passed at which appeared in our columns of last week—among which was one for the appointment of a committee, consisting of Messrs. VIVIAN, RICHARDSON, LEACH, EATON, TRIPP, and Major PHILLIPS, to take into consideration the differences which have arisen, and to ascertain if an amicable adjustment of these differences could not be effected. Notwithstanding this apparently pacific step on the part of the Swansea proprietors (for Colonel and Mr. N. P. CAMERON were the only persons representing the London holders present), and the necessity and importance of unanimity in such an undertaking, we cannot avoid feeling that a spirit of opposition and exclusiveness appeared to prevail, which all the exertions of a committee, however anxiously applied, and well directed, will not be able easily to quell. The CHAIRMAN, in opening the business, regretted exceedingly the necessity of convening the meeting; but the Swansea directors were anxious to render every explanation in their power, in order that all the facts relative to the late disastrous differences might be laid before the shareholders: he then alluded to the late meetings, and stated that the opinion of Sir F. THESIGER had been taken; and that opinion was, that the London meeting, held the day previously to the one at Swansea, was illegal. He then referred to a pamphlet, extensively circulated in Swansea, containing a report of the London meeting, and charging him (Captain M.), "that at a meeting of the London board, at which he presided, the minutes of the meeting were taken by him down to Swansea, when it was found he had made alterations and additions to the same?" he emphatically denied it, and Mr. FRANCIS bore testimony that no such alteration had ever taken place. Mr. JENKINS, the Swansea solicitor, rose to explain another charge which had been made—viz., the substitution of the word *may* for *shall*, in the Bill when going through the Lords' Committee. He declared that there was not a word said about the Lon-

don shareholders having any thing to do with the management; after going into committee, to his great surprise, it was found the clause had been altered from the original, which allowed the meetings to be arranged, and confined them to London alone; he, as the company's legal adviser, instructed the Parliamentary agent to put in the word *may*, so as to leave it to the choice of the shareholders: he fearlessly took upon himself the responsibility of the alteration. Colonel CAMERON addressed the meeting at considerable length; he asked if the directors intended to keep faith with the London shareholders, or proceed, in defiance of all honour; he had acted all along with the greatest assiduity: it was well known, that when they had the greatest difficulty in getting rid of their shares, he took 900—they were paid upon, and the deposit in the bank; with respect to the opinion of Sir F. THESIGER, he ridiculed it, and said he had taken that of Mr. LLOYD, which was quite opposed to it, and whose opinion, he believed, was to be fully depended upon; he wished to know if the Swansea directors were prepared to reimburse himself and friends, and relieve them from all future responsibility? he felt sure, however, that if the management were left to a London board, the project would be carried out; he was prepared to lay out 1500*l.* in shares at once. Having urged the propriety and importance of the meeting coming to an express resolution, embodying the opinions of the very large body of shareholders then present, as to whether the management should be conducted at Swansea or in London, he trusted they would not separate without a resolution on the subject. Mr. TRIPP immediately took up this challenge, and moved a substantive resolution, that the management be in Swansea, which was immediately carried unanimously. The meeting stands adjourned to Thursday, the 23d inst.; and, in the mean time, it must be left for the committee to use their best endeavours to allay the present irritation, and bring about a good understanding between the belligerents—the only result which can save the property of the shareholders, and carry out an undertaking which will be of such immense public benefit.

The seventh annual meeting of the PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY was held on Wednesday last, a full report of which will be found in our columns. This powerful association, composed of the wealth and influence of the merchant princes of England, which has opened up such extensive facilities for communication with our important possessions in India, and, still more distant, China, is progressing most satisfactorily, and still establishing new routes, for the purpose of meeting the increasing wants of the public, and the growing importance of our extensive colonial possessions in the East. It will be seen by the report, that an additional capital of half a million sterling is about to be raised, for the purpose of extending operations in the East; that, in all probability, a line of communication will be established with Australia, under contract with the Government, for the conveyance of the mails between those colonies and the mother country, and which is to be effected by stated voyages from Singapore to Sydney—a route at present almost totally unfrequented, but which, with Government aid, it is expected would be rendered profitable. Such an establishment would be of the utmost advantage to the rising colonies of New Holland, as tending to open new and extensive markets for their agricultural and mineral produce, and the supplying, with greater facility, many articles of merchandise which they now import. The financial statement, it will be seen, is highly satisfactory—a dividend, for the whole year, being paid of 8 per cent., free of income-tax, with large reserves, in the shape of "depreciation" and "insurance" funds, and the ordinary reserve fund, preparing them for any casualties to their vessels, without a fear of being obliged to encroach upon the capital. Upon the whole, it would appear, that this important company was never in a more prosperous state; and their present position, with the vastly extended undertakings now under consideration, undoubtedly stamps it as the greatest undertaking for a company of private merchants, ever established in the history of the civilised world.

PRODUCTION OF COPPER IN AMERICA.

The following statement of the mineral agent of Lake Superior, for the present season, and to Oct. 1, gives the quantity of ores and metals raised and shipped out of the district, from the commencement of operations:

	Ores and metal raised.	Amount shipped.
Lake Superior Company.....	1,114,841	31,441
Eagle Harbour Company.....	321,000	81,164
Copper Falls Company.....	217,050	15,263
Pittsburg and Boston Copper Harbour Company....	7,283,240	1,497,481
North-west Company.....	190,000	7,264
Lac La Belle Company.....	200,000	1,328
Sault Ste. Marie Company.....	300,000	383
Algoma Company.....	120,000	11,135
Bohemian Company.....	80,000	4,549
All others making reports.....	1,327,569	40,203
Total.....	10,214,200	1,693,505

This leaves a balance of 8813 tons of mineral to be smelted in the district. There were four smelting-works being erected, and which will be ready for operation next season. We should like to hear what the copper protectionists will say to this; and whether, with the produce of 8,500,000 lbs. of ore, probably 1800 tons of fine copper being poured into European markets, they are still prepared to say, it would be policy for us to shut our doors against the admission of foreign copper ore.

FRENCH STEAM NAVIGATION IN THE INDIAN SEAS.—There has long been an anxious feeling on the part of French Governments, as well as the nation generally, to establish a regular steam navigation in the Indian seas, to compete, if possible, with the present predominance of British commerce in that quarter of the globe. The long-wished-for project of cutting a canal across the Isthmus of Suez, the principal construction of which the French engineers were congratulating themselves to be left in their hands, having been given up—Mehemet Ali being convinced of its impracticability—another scheme has emanated from our versatile neighbours across the Channel. Nothing daunted by this failure, the Government appear decided, at least, to make the attempt to establish a regular communication by steam between the Isle of Bourbon (one of their richest colonies) and the port of Suez. For a long time past the principal inhabitants of the colony have expressed a desire to see a line of steamers established; and the Colonial Council has, on various occasions, occupied itself with this important question, and voted the sum of 3000*l.* to any company who should first carry out the project. The Chambers of Commerce of the principal ports of France have been consulted, and applications made to several companies in India and London, but none came forward to second the proposed undertaking, or risk the outlay. The Ministerial organ of France, the *Journal des Debats*, says, that "the Minister of Marine, the Duke de Montebello, has thought that in an affair of this importance, and which may have such good results on the commerce of France, it belonged to his department to give the first impulse. Accordingly, it has charged itself to find out the most practicable route, risks the dangers, if there are any, is ready to meet the expense, and the difficulties inseparable from a first trial. Two steam-vessels, of 230-horse power, are to be added to the naval station of Bourbon—the *Cassini* is about to leave for that island, and another steamer will shortly follow, so as to realise the so long anxiously desired project—a regular communication between Bourbon and Suez." That such communication, when once established, will be of immense importance to the commerce of France, there cannot be a doubt; the great, and, perhaps, the only, difficulty which they will have to encounter—and it will be no trifling one—will be a regular supply of fuel.

A CHARACTER.—Lately died in London, William Anthony, Esq., one of the most remarkable men of his day. He was of a very ingenious turn of mind, and effected many improvements in watchmaking, and other mechanisms: 30 years ago he joined in a patent for the application of steam-power to passenger vessels in the Thames. In 1823, he, singly, resisted an attack of burglars on his house, where he had a consignment worth 2000*l.* of watches for exportation. In 1825 (the bubble year), he engaged in many of the schemes then afloat, and lost considerably; but his love of speculation will lead him to invest large sums in exhibitions in the metropolis, and in chemical works in Clerkenwell. He was also one of the earliest shareholders in the Manchester and Liverpool line; but his speculations resulted in great losses. He was engaged for nearly 20 years in a disputed reference of partnership accounts, which cost him above 80,000*l.* He has left some freehold property to "his nearest of blood, claiming within 12 months," and in default of nearer, then to his first cousin's son, Mr. Charles Nash.

IMPROVEMENTS IN THE MANUFACTURE OF IRON.

[Specification of patent granted to Reginald James Blewitt, of Llantarnam Abbey, Newport, Esq., for improvements in the manufacture of malleable iron.—Patent dated the 27th of May, 1847.]

It will be known to most of the readers of this Journal, that the usual mode of preparing pig or cast-iron for the malleable cast-iron, is by melting it, or by mixing together and melting different qualities of pig or cast-iron, with coke in furnaces, called refineries, and keeping such iron there in a state of fusion, exposed to a great heat, and to a strong blast; and the produce of this operation, run into moulds, is called refined iron, or metal plate. The patentee uses this, either alone, or mixed with different quantities of pig or cast-iron, in the puddling-furnace, and subjects it to the after process of puddling, by which it is brought into the first state of malleability. He states, he has discovered that a better quality of refined iron, or metal, may be obtained from an air furnace—such as is commonly used for casting, or foundry purposes—than from the refinery, by which there is less waste of metal, and less expense of fuel, in the manufacture. He lights and heats an air-furnace in the usual manner. For each charge he puts in about four tons of pig or cast-iron, of such qualities as the manufacturer may think most desirable to produce the required quality of malleable iron, as has hitherto been the practice in using refinery furnaces; and the charge, when fully melted and mingled together at the bottom of the furnace, is run into sand, or iron moulds, of any convenient size, and then subjected to the after process of puddling, which he conducts as if using refined metal produced from ordinary refinery furnaces. The fuel he employs for heating the air furnace is a white-ash, semi-bituminous coal of excellent quality, to which, he states, may be added, with good effect, 1 or 2 cwt. of charcoal to each charge; but he does not confine himself to this description of fuel. The patentee does not claim the use of a foundry air furnace for casting or foundry purposes, nor the mixing or melting of pig or cast-iron, nor the use of coal or charcoal therein, nor any particular form of furnace, nor the running of iron into sand or iron moulds, nor any particular mixture of iron, as such separately do not form any part of his invention; but what he does claim is, the employment of an air furnace, such as is commonly used for casting or foundry purposes, in the manner described, for mixing, purifying, and improving pig or cast-iron, and subjecting it to the after process, called puddling—thus producing malleable cast-iron.

Patent-office and Designs Registry, 210, Strand, Dec. 8.

STUPENDOUS IRON BRIDGE IN RUSSIA.—A contract having been entered into between the Imperial Russian Government and Mr. Vignoles, the engineer, of Trafalgar-square, for the construction of an iron suspension-bridge over the river Dnieper, at Kieff, the first shipment of machines and iron-work to be used in its construction, was made at Liverpool a few days since in the British barque *Flirt*, Mr. A. Dove, master. Our readers are aware, that the Dnieper follows a course of about 800 miles through the Russian dominions, before emptying itself into the Black Sea. With the exception of about 40 miles, where it is interrupted by cataracts, it is perfectly navigable. The articles shipped consist of various massive pieces of iron, of prepared forms, the packages being numbered from 1 to 320, and weighing, in the aggregate, 274 tons. They consist of sheeting pile, and foundation pile weights, 5-in. diameter shafts and couplings, cylindrical pieces and stands, with bolted pedestals, besides 14 cases of bolts and nuts. They have been prepared at a foundry at Bolton, and are consigned to the house of Messrs. Raffalowitz and Co., of Odessa, from whence they will have to be carried in carts, drawn by bullocks, 400 miles, to Kieff.

IMPORTATION OF RAILWAY IRON FROM NEW YORK.—Several somewhat singular cargoes have arrived from America during the week, being no less than some hundred tons of railway iron; but whether of American make, or a re-shipment of British iron to England, is not stated in the bills of lading. Hitherto, in addition to all that could be made in America, large quantities have been imported from England; nor is it to be expected, that America will, for years, be able to supply even her own requirements in the formation of her projected railways, much less become generally an exporting country; the fact is, large contracts have been entered into with an American house, for a large supply of iron for railway purposes, &c., for Russia. The ship *New World*, in addition to a large cargo of general provisions, brought 149 tons of iron; the *John R. Shidley* also, in addition to large quantities of provisions, has on board 892 tons of railway iron. Several other arrivals have taken place, and more are expected; it is said they are all consigned to order for Russia.

THE LATE M. HALLETTE'S ESTABLISHMENT AT ARRAS.—We have been informed that, in consequence of there having been no bidding above the upset price of 1,000,000 fr. (40,000*l.*), when this property was offered for sale on the 16th of Nov., it is to be carried on by a private company of capitalists, whose co-operation has been secured by the family. We shall, in a future Number, have an opportunity of describing more fully the organisation under the new management, in which, we understand, several opulent English capitalists are to take an active part. Situated as it is, on the Great Northern Railway, from Paris to the frontiers of Belgium, it may be considered one of the first foundries in France, and completely independent of the great monopolising class of ironmasters and coalowners, whose proceedings have hitherto been the greatest drawback to the progress of this important branch of national industry.

THE PORT OF VALPARAISO.—This splendid port, without exception the finest on the whole western coast of South America, and which may justly be considered the Liverpool of the republic of Chili, is intended to be made the seat of Government, instead of Santiago, which will enable the Congress better to carry out the great improvements, which have long been proposed for this flourishing portion of the New World. To the mining capitalist, Chili offers unbounded resources, as it is rich in the precious metals, as well as copper, platinum, and other metallic ores. Coal, to a considerable extent, is also known to exist, and only requires the judicious application of capital and enterprise to return ample remuneration to the adventurers, and be made a perfect national treasure, for the coaling of the steam-vessels which frequent the coast.

THE ELECTRIC TELEGRAPH VERSUS TIME.—In a letter received by a gentleman of Manchester from a friend in Indiana, United States, is the following passage relative to the electric telegraph in that State:—"That wonderful invention, the magnetic telegraph, passes through our country from the eastern cities, communicating intelligence almost instantaneously. News has been transmitted from Philadelphia to Cincinnati, a distance of 750 miles, on one unbroken chain of wires. Of course, as Cincinnati is 10° west of Philadelphia, or 40 minutes of time later, the news is that much ahead of the time."

ELECTRIC TELEGRAPH IN THE UNITED STATES.—The following is a table of the electric wires finished, in progress, and contemplated, as far as is known:—Finished and working, 3047; in progress, 2812; contemplated, 2000—7859. As many of these have two wires, the length of wire may be safely estimated as exceeding 11,000 miles.—*New York Herald*.

RAILWAY COMMUNICATION WITH SCOTLAND.—The railway communication between England and Scotland is likely ere long to be rendered perfect, by means of arrangements stated to be now in progress for leasing the Scottish Midland to the Caledonian, North-Western, and Lancaster and Carlisle Railways. The terms mentioned are a perpetual guarantee of 6 per cent., with half the profits on the old and new shares. Negotiations are also said to have been reopened with the Aberdeen Company, which, if carried out, will give a continuous line of 500 miles from London. On the 20th inst., part of the Aberdeen line will be opened.

CALEDONIAN RAILWAY.—The operations on this line are in a state of great forwardness, and its speedy opening for the purpose of traffic is confidently expected. In Edinburgh, the line having been successfully carried beneath the houses at Gardner's-crescent and Romilly-place, preparations are actively going forward for laying the permanent rails at those points, to which the line has nearly been completed. At Dalry, the road has been diverted for a short distance, and the bridge across the railway is scarcely half finished; but, from the number of men employed, it cannot materially retard the opening of the line. At this point the engine-shed is to be stationed, and considerable progress has already been made in its construction. The viaducts at Slatford and Linthouse Water are now completed, and the state of the line generally is such as to render it probable that it will be ready for traffic in the course of a few weeks.

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.—The spirited contractors for the construction of a portion of this line, Messrs. Frost and Bate, have commenced the works on their contract, which commences at West Bromwich, runs through Bilston to Priestfield, and there joins the Oxford and Worcester line. The first brick was laid on Monday last, by Mr. Samuel Frost, C.E., in the presence of the engineers of the company and other gentlemen, together with a large number of the inhabitants of the town of Bilston, who look upon this line as an important undertaking in a commercial point of view, and also as one which will afford employment through the winter to a large number of hands, who have hitherto been unemployed.—*Wolverhampton Chronicle*.

LONDON, BRIGHTON, AND SOUTH COAST.—The branch line from Lewes to Newhaven was opened on Monday. Only one up and one down train per day will carry passengers during the winter.

It is stated that Mr. Brunel, the eminent engineer, has purchased upwards of 70 acres of land, in the neighbourhood of St. Mary's Church, near Torquay, and is about to erect a mansion for his residence.

The corporation of Swansea, where the British Scientific Association are to assemble next year, have most liberally voted 500*l.* towards the fund for providing for their accommodation and entertainment.

PROGRESS OF FRENCH MINING INDUSTRY.

(FROM OUR PARIS CORRESPONDENT.)

Mention was made in my last of the formation of two companies—one for renting and carrying on the iron-works of Toga, &c., in Corsica; the other, for advancing money on mortgage of the works and their dependencies. These iron-works were formed in 1835, with a capital of 2,000,000 fr., which they swallowed up; and a further sum of 1,500,000 fr. was also raised some time ago. The money to be advanced by the two new companies is 1,600,000 fr. Adding these totals together, we find that the Toga Iron-Works have taken, and propose to take, no less a sum than 3,500,000 fr. That this great outlay has not produced satisfactory results to the shareholders is clear from the fact, that money is now wanted.

The Belgian papers make reference to the fact, mentioned in my last, with respect to the formation of a port at Marseilles, and the manner in which it may be expected to facilitate the introduction of English coal into France, and even to Paris; and they exhort the coalowners of Belgium not to lose sight of it, so that they may profit by it. One cannot quarrel with the Belgian journals for manifesting this concern for the interests of their country; but let the English learn from it the lesson, that they really must exert themselves to keep possession of, and to extend, the market which France presents to their products. Belgium, at present, sends a greater quantity of coal and iron to France than England. In 1845, for example, she sent 13,961,664 met. quin. of coal—while England only sent 5,057,489; and, in the same year, she sent 295,709 met. quin. of cast-iron—the importation from England being only 229,262; and it is not in France alone that she outstrips us in these descriptions of exports—in fact, in some foreign markets, which a few years ago we had all to ourselves, she is now the principal seller; and, in others, she presses us very hard. Yet, not content with what she has, she is moving heaven and earth to increase her exports. Your readers, then, I repeat, must be up and stirring. They have got an active, enterprising opponent to deal with—an opponent which is already formidable, and which is becoming more and more so every day. They cannot commit a greater error in the world than to despise Belgium because it is little. The progress which the commerce of that country has made, and is making, is really surprising; and you may depend upon it that, if the warnings which are now held out to your readers be not taken, they will, some day, repent it bitterly. Take, for instance, the very case which has led to these remarks—the introduction of coal by Dieppe. The formation of a port near that town, if it should take place, would hardly balance to the English the advantages which the Belgians derive from the Northern Railway of France, which puts their great towns, and, in fact, their principal coal-pits, into direct communication with Paris; and yet no sooner does an English journal point out to English coalowners the facilities which the proposed port would afford them to bring their coal to Paris, than the shrewd Belgians seize on the fact, with the view of seeing whether they cannot make the port profitable to themselves.

But why should the English wait for a port to be made at Dieppe—an undertaking which is at present only talked about, and which, even if it were seriously resolved on, would take a very long time to complete? Have they not at this moment a railway to within a few miles of Boulogne? And will there not soon be a railway from Dieppe to Paris? Why not take advantage of them to bring coal to Paris? Admitting that the expenses of transferring coal from vessels to carts, and from carts to railway wagons, would form a somewhat heavy item in the total, yet still it is unquestionable that English coal can be brought to this capital cheaper than the native coal of the Loire. Perhaps, indeed, it would at first be dearer than the Belgian coal; but would it not be worth the while of the English even to submit to a temporary loss for the sake of securing a market which possesses a population of upwards of 1,600,000? If I had a large stake in any coal-pits, I would at this moment submit to almost any loss, provided I could get my coal to Paris; for the French, in spite of the frivolity which we ascribe to them, are such creatures of routine that, if they once got in the way of purchasing English coal, they would continue to purchase it; and they assuredly would get into that custom, if the coal were brought to their doors at a reasonable rate. If it be asked, what is meant by a "reasonable rate," I answer, a price not very much higher than what is paid in several counties of England. On this point, however, I will enter into detail, when I shall have concluded inquiries which I am now making.

The imports of copper made into this country, during the month of Oct. last, have been 2125 metrical quintals from England, 2019 from Chili, 3420 from other countries—total, 7636. Of cast-iron, during the same month, the imports were 18,567 from England, 44,653 from Belgium, 5537 from other places. Of coal, the imports were 1,594,542 met. quin. from Belgium, 596,768 from England, 213,260 from the Zollverein, 58,784 from other places. The import of lead was 47,495; of zinc, 10,725; of tin, 2635.

The following have been the imports of the first ten months of 1847, 1846, and 1845:—

	1847.	1846.	1845.
Copper—From England.....	34,881	36,621	11,493
" Chili.....	7,787	5,243	1,618
" Other countries.....	24,076	17,885	69,331
Tin.....	67,344	69,949	82,442
Cast-iron, unwrought—England.....	12,599	14,337	16,540
" Belgium.....	369,870	296,142	135,231
" Other places.....	486,706	345,120	245,387
Coal—England.....	38,442	29,874	71,034
" Belgium.....	295,018	671,186	451,692
" Zollverein.....	4,873,933	5,666,201	5,228,413
" Other places.....	12,017,779	9,852,095	11,160,033
Lead.....	1,680,317	1,470,196	1,586,073
Zinc.....	33,434	442	308
Other places.....	16,585,463	16,988,934	17,975,833
Lead.....	194,276	292,551	191,767
Zinc.....	134,728	84,700	118,690

As a set off to all these imports, France can only boast of an export of between 20,000 and 30,000 worth of machinery in each year. Compared with last year, it will be seen, that the imports from England have decreased.

On the 30th, the Minister of Marine will receive contracts for about 30 tons of copper, and 111 tons of sheet-iron, for Nantes.

The St. Didier letter of the 2d says, that the last decline announced has completely paralysed affairs. Affairs in *fontaines blanches* are also very confined. One lot of 200,000 to 300,000 kilogrammes, has been sold for 145 fr., delivered at St. Didier. According to all appearances, the price of that article will further decline. At Bordeaux, copper for sheathing was very rare at the end of last month. For what was *en douane* (in the Custom-house), the last price was 220 fr.; and at 222 fr. 50 c. in the roadstead there would have been purchasers. The works of Bastide can now, it is said, deliver copper at reasonable prices.

What I stated in my last, with respect to an arrangement being about to be effected between the General Company of the Loire and the consumers of St. Etienne, was substantially true. The affair has not, however, yet been finally terminated. It appears that, before coming to a conclusion, the company is desirous of procuring a condemnation of some of its principal adversaries, on a charge of calumny, for which a prosecution is now in progress before the tribunal at Paris. This will give it the whip-hand of its adversaries, and enable it to make concessions with a good grace.—Paris, Wednesday.

BELGIUM.—The Belgian Government lately ordered a new system of estimating the value of exports and imports to be adopted. This system has been applied to the returns of the imports and exports of 1846; and in the report on the matter, which has been drawn up by the Minister of Finance, the following facts are stated:—

The consumption of articles imported from England has been on the decline since 1842, although the exports to England have increased. There was an increase in the import of copper, but a decline in that of lead, iron-ware, machines, &c. The exports in 1846 were 1,360,000 tons of coal, of the value of 18,250,000 fr.; 62,000 tons of cast-iron, 2,800,000 kilos. of machines, 4770 tons of nails, &c.

The Minister of Foreign Affairs has written to the Chamber of Commerce of Antwerp, to say that the Belgian Consul of Manila has written to recommend that vessels proceeding there shall take out coal instead of ballast. The recommendation may be valuable to English vessels, as well as to Belgium.

Distress continues to prevail in the great coal district of Mons. Two banking and discount houses of that city have just failed. One of them, it appears, was accustomed to advance not less than 8000 fr. a week to the proprietors of coal-pits for the payment of wages, &c. The sudden cessation of such advances must have been severely felt, and some surprise

has been expressed that it has not already occasioned very serious disasters. No public notification has yet been given of the course which the Government will pursue; but the general belief appears to be, that it will not think itself warranted in adopting any peculiar measures for the relief of the coalowners, lest it should be constrained to extend them to other branches of industry, which are at present suffering most grievously from the commercial crisis that, after ravaging England, has visited Belgium. Some idea of the general distress which exists may be formed, from the fact that the shares in an enterprise, for which the Municipality of Brussels has guaranteed an interest of at least 5 per cent., which was likely to produce double or treble that amount, and the capital of which is secured by mortgage on a number of valuable houses, have actually been sold within the last few days at 36 per cent. less than they cost a few weeks ago, and there was even a difficulty of finding purchasers at that rate!

REDUCTION OF COPPER ORES BY ELECTRICITY.—We commenced a description, in our last Number, of the experiments of MM. Rivot and Phillips, on which a commission, under the French Government, had reported; we now continue their own description. Their next experiment was a mixture of roasted ores, lime, or sand, placed in a well-heated reverberatory furnace, with the scoriae of a previous operation; in such quantity, as would best promote the fusion of the mass, and of charcoal, or coal, in sufficient proportion. When charged, two or three shovelful of small coals were added, to keep the mass from being oxidised by the flames of the furnace—the whole being well stirred, from time to time, in order that it might heat more uniformly. When thoroughly melted, six bars of iron, weighing together from 36 to 45 kilos., are plunged into the metal, some more small coal is thrown in, to prevent peroxidation; and the mass is stirred well every half-hour with rakes, having two prongs, which are very useful for removing the scoriae from the surface of the iron. A wooden pole is also plunged in, which gives off a considerable quantity of gas, and produces a strong frothing and ebullition. From three to four hours' action of these bars are sufficient to reduce the scoriae to a state, in which it contains only about 0.004 to 0.009 per cent. of copper. From pyritic ores, free from arsenic, a very pure black copper has been always obtained, containing only from $\frac{1}{100}$ to $\frac{1}{200}$ of sulphur and iron. It is necessary, that the roasting should be well done, as there will then be no slag on the copper. Attention must also be paid to temperature, as at a red-heat a pure copper has been obtained, while at a bright red-heat, it has contained 3 per cent. of iron. In their report, MM. Dufrénoy and Pelouze reported to the Academy of Sciences, that iron acts on several metallic silicates in fusion at a red-heat, in the same way as at a low temperature, in the solutions of these metals. That the iron, plunged into a triple silicate of copper, lime, and sesqui-oxide of iron, does not precipitate the smallest quantity of copper, before all the sesqui-oxide has been reduced to its minimum of oxidation—whence the conclusion, that the iron introduced into a fused mass of silicate of sesqui-oxide of iron, is completely dissolved and lost. MM. Rivot and Phillips have been led to replace a considerable portion of this action by that of coal; it is only when the coal has reduced to the metallic state a considerable part of the copper, and that the metals are well fused, that the action of the bars of iron on the silicate of the protoxide of iron, of lime, and of copper (not more than 2 or 3 per cent. of the latter), is allowed to commence. Experience in roasting the ore has shown, that the sulphur can be almost entirely driven off, and that the copper obtained by the fusion does not contain more than $\frac{1}{100}$ of sulphur. In the smelting, the consumption of iron varied from 3 to 6 kilogrammes, somewhat depending on the quantity of scoriae in which the iron acts. The small quantity of copper left in the scoriae, renders the process of MM. Rivot and Phillips superior to those at present employed in England and Germany, for the treatment of the pyritic ores of copper; and has also the advantage in point of economy—1000 kilos. being produced at a cost of 28 fr., while in Wales the cost is 42 fr. They have been the first to succeed in the rapid smelting of copper ore in a reverberatory furnace, employing, as reducing agents, coal before and during the fusion, and iron after fusion. In accordance with the conclusions of the report, the Academy approves of the researches made thereon.

PETIT'S APPARATUS FOR COMMUNICATION BETWEEN GUARD AND DRIVER.—This plan was brought before the public as long since as 1841; but the question having now become one of such considerable importance, fresh prospectuses have been issued for circulation. The plan consists of a powerful steam whistle, placed near the driver—tubes are conducted along all the carriages of a train, in which are the bell-wires, which are coupled together at the union of every carriage with the following—which wire is fixed to a winch, by which the guard can cause instantaneous motion to be given to the whistle, which calls the attention of the driver that something is amiss, and causes him to stop the train. No person except the guard can open the whistle, and none but the engine-driver can close it; but there is an arrangement, by which the passengers can open the whistle, in case of sudden indisposition, or other emergency. We have been induced to notice this invention, more from the manner in which the inventor has been treated, than from observing anything new, or particularly meritorious, in it. It appears, that as long since as May, 1840, the patentee, feeling that it was indispensably necessary, for the proper security of railway travellers, spent about 800 l. in maturing his invention, and constructing and perfecting the apparatus, which he got permission to fit up on a train on the London and Birmingham Railway, and it was held out, that he should receive their patronage and support. After having fully tested the practicability and utility of his plan, the directors declined to entertain it, under the plea, that his demand for licenses under the patent were unreasonable. Disappointed in hopes, and disheartened at finding so much apathy prevail on a subject of such importance, he declined devoting further attention to the subject at that time, but now again brings it before the public, as the subject appears to be one causing universal interest.

HYDROSTATIC TURN-TABLE.—Mr. Allan, of Crew, has taken out a patent for a turn-table for railways, in which he employs the hydrostatic pressure of fluids, for the purpose of supporting the superincumbent weight. These tables are constructed of wrought-iron plates—the necessary strength and stability being given by numerous vertical ribs of wrought-iron plates, attached by angle-irons, to the lower edges of which are also firmly attached, by angle-irons, bottom and circular sides, also of wrought-iron plate—thus forming a hollow water-tight box. This hollow platform is supported in the turn-table pit, or reservoir, by the pit being filled with water, or other fluid, and revolves on a central fixed pillar, around which is a projection, on which run a series of friction rollers. The turn-table pit, or reservoir, is filled with water, or other fluid, just sufficient to sustain, without any deflection of the platform, the maximum weight of the locomotive engine, or carriage, which may, at any time, pass over the turn-table. The height of the surface of the water in the pit being once ascertained, and adjusted proportionally with the maximum weight, it is then constantly maintained by a ball-cock, attached to a supply-pipe, from a cistern above. On the platform are three separate lines of rails abreast, and these are crossed at right angles by three other sets of lines, by which means one turn-table is sufficient to perform the work, and effect the transfer of a locomotive engine, or carriage, from one to the other line—for which, with turn-tables as usually constructed and arranged, two are required; the new one is also worked with considerable economy. The pit, or reservoir, is formed of masonry, or bricks, laid in cement, water-tight, having a sufficiently firm and stable foundation, on which the centre pillar can be properly supported—the object of which, and the friction rollers, being to reduce to a minimum of the friction caused by the upward pressure of the platform upon the plate, or head, of the centre pillar. A cast-iron kirk is fixed on the top of the sides of the reservoir, being cast in segments, and bolted together—the circular edge of which is brought in contact with the outer edge of the platform, which thus revolves flush with it. By the arrangement of the rails, as adopted by the patentee, a locomotive engine, or carriage, may be transferred from one line of rails to another, by a semi-revolution of the turn-table.

The following gentlemen, representing the freighters using the roads of the Monmouthshire Canal Company—Messrs. Thomas Brown (of the Ebbw Vale Iron-works), Wm. Routh (of the New British Iron-works), W. S. Cartwright, Martin Morrison, and James Brown, attended by Mr. W. W. Secretan Woodhouse (solicitor)—had an interview, on Monday last, at the Railway Board of Trade, Whitehall, with the Right Hon. E. Stuart, M.P., Sir E. Ryan, and Major Brandreth. The deputation we understand, were well received, and are much gratified with the result of the interview.

Original Correspondence.

MINING IN CORNWALL.

SIR.—In my last, I mentioned the mining district, extending from the flat ground, between the Mounts Bay, to St. Ives, about six miles east, to join the granite. I will now presume giving an outline of the mines extending on and in the granite, from Breage around the granite hills, through Gwennap and Stithians, a length together about 20 miles, containing Great Wheal Vor and Poladerns Downs, Great Work, and several other mines, all rich for tin, and Godolphin, formerly rich for copper, Wheal Crenver, and Wheal Abraham, mentioned in a former letter, on to Doleath, Cook's Kitchen, Tincroft, Stray Park, North and South Rosekear, the Pool Mine, and others, on through Gwennap and Stithians; mention will be made of only a few of them. Wheal Vor and Poladerns Downs, the greatest tin mine in the world, is worked partly in clay-slate, and partly in granite, to 250 or 300 fms. deep, making a return, in the last 40 years, which I should estimate at 1,500,000 l.—perhaps, it may be 2,000,000 l., leaving good profits. The Great Work Mine is similarly situated with regard to strata, and has been worked at a great depth, making great returns and profits. These mines are situated where deep mines might be looked for regarding strata, and the workings have realised the most sanguine expectations in this respect. Godolphin Bridge Mine is similarly situated regarding strata, having the granite to the west and underneath it. This mine, previous to 1805, was very rich and profitable, worked from 60 to 80 fms. deep, and lay dormant, or unworked, from 1805, till about 1835, when it was again set in motion, and continued to work till within the last two years, and it is now abandoned, with some considerable loss. If the trials in the late working were effectually made to a proper depth, and westward, towards the granite, then this mine would appear to be an exception to all the great mines similarly situated. Crenver and Wheal Abraham were mentioned before as two of the deep mines. Doleath, similarly situated, has been at work for centuries, making great returns and profits, and, I believe, is worked 300 or 350 fms. deep; I don't mean to say that the mine has at all times given profit—I believe it has been worked many years at a time unprofitably. During a great part of these periods, the lords have given up all royalty, the amount of which to be laid out on trials, approved by the lord's agent and manager; and, in some instances, the adventurers have resumed their profits, or dividends, for some time, before the lord again claimed his royalty. This conduct, from lord to adventurer, may be taken as a rule throughout this great district, although there may be exceptions to it. All, or nearly all, the other mines on to Gwennap, are situated on the north side of the granite, and may be looked forward to as deep, lasting, and profitable mines. The Gwennap district, the greatest one in the world, worked 300 or 350 fms. deep, is situated on the eastern side of the granite, covered, to a certain depth, with fragments, or the component parts of every rock that can be imagined, in beds and channels, dressed in all manner of ways—baked, roasted, fried, and boiled—containing the richest mineral soup in the world, or more of it than any other district passing from north to south, and from east to west, comparatively speaking, as through a basket, forming the rich jelly found in the veins, from whence, I presume, greater returns have been made, than from any other district in the world of the same extent—at least, I will say, the greatest profits; and, I believe, I might say the same of the whole country, mentioned in this and former letters. A vein found in the district mentioned in this letter, may be safely pursued, and the skill in such district principally depends in engineering, and the carrying out the practical mining operations; whilst mining in many other parts of the kingdom requires a very different kind of knowledge. In this district, for 20 miles, from east to west, one mine will give tolerably correct ideas of what may be found in another; but in the primitive clay-slate, every mine, or vein, with its immediate connections, should be taken, independent of what a neighbouring vein has done, or is in course of doing.—A TRAVELLER: Dec. 9.

MINING IN THE GREAT ORMESHEAD, LLANDUDNO.

SIR.—I have observed the remarks on "Traveller's" letter, in the *Mining Journal* of last week, by "W. W." (which I take to mean water-works), stating the new and old mines to have been commenced and worked without capital, and the profits from them to the lords and adventurers amounted to 300,000 l., and that the profit from Tygwyn, in 20 years, was 80,000 l. That the whole returns from Tygwyn have not much exceeded 90,000 l., is an ascertained fact—whilst one-sixth, in shape of royalty, was paid—leaving a clear return to adventurers of about 75,000 l.; the whole cost of working amounting to more than the returns, leaving the adventurers minus some considerable sum. The profit said to have arisen from the new and old mines, for the last 40 years, is erroneous. It is certainly a great deal more than the returns made during that period. "W. W." after such statement, will certainly not object to give some data, showing how he arrived at such conclusion, as to induce him to put forward such statement. It is quite evident to me, that "W. W." has no basis on which his assertion is founded, and merely wrote in the heat of airy notions. I notice your readers will at once see the strangeness of "W. W.'s" letter, where he states, the profit of one mine to be 100,000 l.; and another, 200,000 l. That the profits of both mines have not exceeded 50,000 l., appears to me clear—for I believe in no respect, or at no period, were the mines very rich; and the system of working, allowing the men to take their proportions of ore out in the mine—the adventurer and miner both going to market to sell their produce—thereby incurring much expense to the men, and considerable loss of time from their work—all had a tendency to lessen the adventurer's profits. This is the system practised up to the present day, and it is in unison with all the other branches of management. My object being to put forward nothing but the truth, and to get others to do the same—to undeceive those in mining who have already been too much imposed on by false statements—and ever anxious to give a doubt in favour of the miner, compels me thus to write. "W. W." will, perhaps, also explain, how the new and old mines could be set in motion, and continued, without capital, as it will require five or six months from the commencement of working to bring the ore into money? A TRAVELLER: Dec. 9.

MINING IN CARDIGANSHIRE—CWMYSTWITH MINE.

SIR.—As it is not improbable that this old mine may again change hands, it may be interesting to your readers to have some account of its situation and prospects.—Cwmystwith Mine is formed in a deep ravine, on the river Ystwith, 17 miles from Aberystwith. The river, for 10 miles from Aberystwith, flows through a valley, whose sides rise so gently as to allow of cultivation; and, in some of its wider openings, are interspersed some beautiful seats—among others, that of Crosswood, the mansion of the Earl of Lisburne. Proceeding from Aberystwith towards the mineral region, shortly after passing Crosswood, the character of the scenery changes—instead of a valley, the bed of the river becomes almost a chasm, continuing, in an eastern direction, for seven or eight miles. About a mile from the eastern end of this chasm, is situated the old and celebrated Cwmystwith Mine. The sides of the valley, at this point, stand up, almost like walls, for nearly 700 feet above the bed of the river. At the summit, the ground is level; and it is clear that this was the natural surface of the country, as, from the top, the whole appears comparatively level, and the edges on each side of the dingle seem to have been broken from each other, and as, if they were to be brought together, that they would fit, and again form a flat country.

The appearance of the mine is particularly barren and desolate; and so straightened is the channel of the valley, that the wind always blows eastward, or westward, through it, changing to the side that forms less than a right angle with its course. It, perhaps, deserves to be remarked that, by following the river about a mile to the westward of the mine, the valley opens considerably, and we get a view of Hafod—considered to be one of the most picturesque spots in Wales. The summer landscape here is the most charming that can be imagined, and is replete with wood, rock, mountain, cataract, and river—indeed, nothing can be more enchanting than the scenery of the Hafod grounds. But, in contemplating the beautiful, we must not lose sight of the useful. It is necessary to observe, that the vale of the Ystwith affords the only route for a railway from this part of the country to England. For the benefit of your railway friends, and engineering readers, I may state that the rise is a gradual one, by the line of the River Ystwith, from Aberystwith to the source of the Elan—a distance of 20 miles—the rise being 1 in 80. The Elan falls into the Wye, near Rhyader. From what I have stated, it will be seen that, to gain the summit level on a line from Aberystwith leading into England, a gradient of 20 miles of 1 in 80 must be overcome. I leave the discussion of the practical solution of this to those who are interested and skilled in railway matters.

Cwmystwith Mine was undertaken by the present company in the autumn

NEW SYSTEM OF MACHINERY FOR VENTILATING MINES.

INVENTED BY MR. WILLIAM PRICE STRUVÉ, Civil Engineer, Swansea.

of 1844; the first cost was incurred in December of that year. At that time, the only ore discovered in the mine lay in a nearly horizontal bed, on the hanging side of the lode; it was calculated to be about 500 tons, and was the remnant of a great body of ore, worked away in the preceding 10 years. It was, then, considered that the mine was fast coming to an end; it had been inspected and refused by various scientific miners; and it was concluded that both the landlord and miner would soon cease to receive any benefit from it. The present company, however, formed a different opinion of its prospects, and determined, by a vigorous system of work, to lay the whole mine fairly open. The mine may be divided into four districts—Pugh's, or the western district; the King's Side; the Great Rock; and Copper Hill, the most eastern. The western, or Pugh's, ore ground, was the only one, then, in work. The engine-shaft was sunk to a 30 fm. level, by means of a 30-ft. water-wheel, 2 ft. wide on the breast; and the 30 fm. level was driven about 70 fms. westward, and was principally used as a way-gate, to take away the ore from the flat before alluded to. The King's Side district had been worked to a few fathoms under the adit, by means of hand-pumps, and had been for several years abandoned, under an impression that it had been cut off by the soft ground; in fact, it was supposed that it had met the same fate as Pugh's was thought to have undergone, and that both were either swallowed up, or destroyed, by a channel of soft clay-slate. The Great Rock, had also been worked to a state of poverty, and presented then, as it does now, the aspect of a mass of ruins. The whole of the ore ground above Bonsall's level fawr, or great level, had been exhausted; and the workings were filled with rubbish and rocks to the surface. Copper Hill, the eastern district, had also been long given up. All those old mines (for each may be considered, not only as a mine, but a very extensive one), except Copper Hill, had been dug, for centuries, from the tops of the cliffs down to the base of the river. In some places, they had gone slightly below the Ystwith; in others, the work was confined to the upper portions of the lodes; and many of the veins in Copper Hill have yet a base of 70 fms., standing perpendicular above the river, which may be worked by adit levels. Your Cornish readers, who are versed in mining, will be surprised that, for an outlay of 3000*l.*, in two years and ten months, these districts have been mostly under cut, and two out of the four brought into a state to make large and permanent profits. In one of the others—the Great Rock—an adit level 17 fathoms below the principal workings has only 6 or 7 fms. to reach the lode; and in the eastern, or Copper Hill, some ore ground has been laid open, which is working at 4*l.* per ton; and some lodes, of much value, have been discovered.

In recommending the mine, it was not a very easy matter to decide upon the best method of bringing such a length of workings into order and profit; but, in the hope of doing so, it was determined to connect Pugh's shaft with the King's Side district, by means of an engine-shaft 180 fathoms to the east of Pugh's engine-shaft, and to drive a level through, which would leave a height of about 30 fms. of the lode. In the second place, to drive the King's Side adit, under the Great Rock workings, a distance of about 170 fms., to give backs of 17 fms., from the old workings, to this adit. Thirdly, to drive a level, at the base of Copper Hill, westward, on the Pengylan lode. Fourthly, to drive a level across all the Copper Hill lodes, at an angle of 45° with their course, in order to get under the old workings, on the highest part of the mountain ground. Fifthly, to cross-cut a lode, called the Copper lode, about 40 fms. below the surface, by continuing an old level, called the Blue level. Sixthly, to intersect the Copper Hill lode, by means of a new level, 300 fms. eastward of any of the old workings. And lastly, to drive the 30 fm. level westward from Pugh's shaft; and to cross-cut north, to ascertain if the vein existed below the bed worked for ore some 5 fms. above.

This work has been going on for two years and ten months, during which time there have constantly been employed 80 miners, and 20 labourers, under ground; with 60 girls on the ore floorings; and the customary number of surface-labourers necessary for such a mine; and, as some people, I hear, have, of late, shaken their wise heads at the management, it is necessary for me to state, that the average cost has been no more than 38*l.* per month, or 13,080*l.*; while the returns have been, according to the estimates, 1207 tons, which, taken at 9*l.* per ton (the price, less the royalty), would leave a deficit of 2217*l.* only, exclusive of 1000*l.* paid for machinery.

The outlay, in trial, has been:—For driving the 16 east, 150 fms. at 5*l.* per fm., 750*l.*; the 30 west and cross-cut, 70 fms. at 6*l.*, 420*l.*; the King's Side adit, 130 fms. at 5*l.*, 650*l.*; the Pengylan adit, 60 fms. at 5*l.*, 300*l.*; Bonsall's level, 80 fms. at 6*l.*, 480*l.*; Kaw's level, 70 fms. at 4*l.*, 280*l.*; Blue level, 30 fms. at 7*l.*, 210*l.*; King's Side engine-shaft, and appendages, 1500*l.*—making a total outlay of 4590*l.*

The discoveries effected by these trials are, first, the lode under the bed of ore by the 30 fm. level. Ore ground has been laid open on this lode, at this level, for a length of 15 fms.—13 fms. of which have yielded nearly 3 tons to the fm.; and there is an excellent course of ore in the western end. The ore above this level, unwrought, is for 10 fms. in height, which, by the length, 13 fms., at 24 tons to the fm., gives 325 tons of ore. But the great value in this discovery is the holding, or continuance, of the ore ground in the western end—which, if it should last for the length of the ore ground in the level above, would give productive ground for an extent of 60 fms. in length—which, at 24 tons to the fm., would easily enable returns to be made from this part of the mine at the rate of 150 tons a-month. Secondly, the King's Side shaft, and 15 fm. level, have laid open ore ground 30 fms. long and 25 fms. high, yielding, on an average, 2 tons per fm.—making 1500 tons of ore. Altogether, the ore ground laid open may be safely estimated at 1800 tons, or 18,000*l.* worth of ore. Returns may be henceforth made with regularity and permanency, from the back of the 30—13 fathoms long, at 24 tons to the fathom, 32 tons a-month; and the back of the 15 fathom level, at the new shaft, 30 fms. long, at 2 tons per fm., or 60 tons monthly. From other ore bargains, the continuance of which is more uncertain, about 20 tons monthly are now returned. Altogether, the mine is in a state to return 110 tons a-month—making it for granted that a fathom a month can be sunk in the engine-shafts; but, as twice this can be easily accomplished, it will be evident that every sufficient allowance is made for the future produce of the mine; and, from the continuance of the ore in the 30 fm. level west, there is every reason to presume that, by the end of the next year, the sales will exceed 200 tons monthly. I will take the sales of the ore, for 1848, at 100 tons a-month; and, estimating the produce at 10*l.* per ton—which is about the average price of lead ore of this quality—it will give 1000*l.* The cost and lord's dues will amount to 450*l.*, and 150*l.*—in all, 600*l.*; and the profits to 400*l.* per month, or nearly 5000*l.*, for the first year. The year ensuing, I have no doubt, from the ore ground now opening, will yield 200 tons per month, and very nearly 10,000*l.* for the year's profit.

The fulfilment of these statements will depend upon very little in the shape of casualties; but there are other sources from which returns may be confidently anticipated. These are the great rock ore ground, which the King's Side adit level has almost reached, and the Pengylan lode, in which some good ore ground has been discovered. Bonsall's adit level is also going forward in a very fine lode, with some good ore in it, and stuff of such a character as almost to ensure good ore ground. It will be thus seen that, out of 4590*l.*, applied to works of trial, about 2300*l.* has been obtained from working the mine, and the remainder from the company—while there is a stock of about 18,000*l.* worth of ore discovered, and laid open in the backs of the levels.—MATTHEW FRANCIS: *Goginan, Nov. 30.*

CHESTER AND HOLYHEAD RAILWAY.

SIR,—It appears, from the newspapers, that the Chester and Holyhead Railway is now completed as far as Bangor, and that the only obstacle to its being opened thus far is, the tubular bridge over the Conway, which, although completed, has not yet been fixed on its bearings. The result of the experiments for testing the strength of this wonderful bridge, should, I think, be made public as soon as possible, as great fear of the issue exists, which is evinced by the extremely depressed value of the shares. As this line—if the Menai and Conway Bridges realise the hopes of the engineer—will have at its termini a larger amount of population than any other in the United Kingdom, it is reasonable to infer, that it will yield a dividend exceeded by none; but, as this is not obvious to all railway investors, I should feel greatly obliged to any one of your numerous correspondents if he would favour us with data upon which to found a sound opinion on the subject. It would be esteemed a favour by many of your readers, if you, Mr. Editor, would insert weekly, among your useful *notabilia*, some facts relating to the progress of these iron tunnels, as such information would tend much to allay the apprehension which seems to have taken possession of the public mind respecting their stability. AMICUS.

Dec. 7.

[Numerous notices have already appeared in the *Mining Journal* of the progress of tunnel bridges and iron girders; and every information which can possibly be obtained of these interesting structures, will be given as their erection progresses, and fresh circumstances are brought under our notice.]

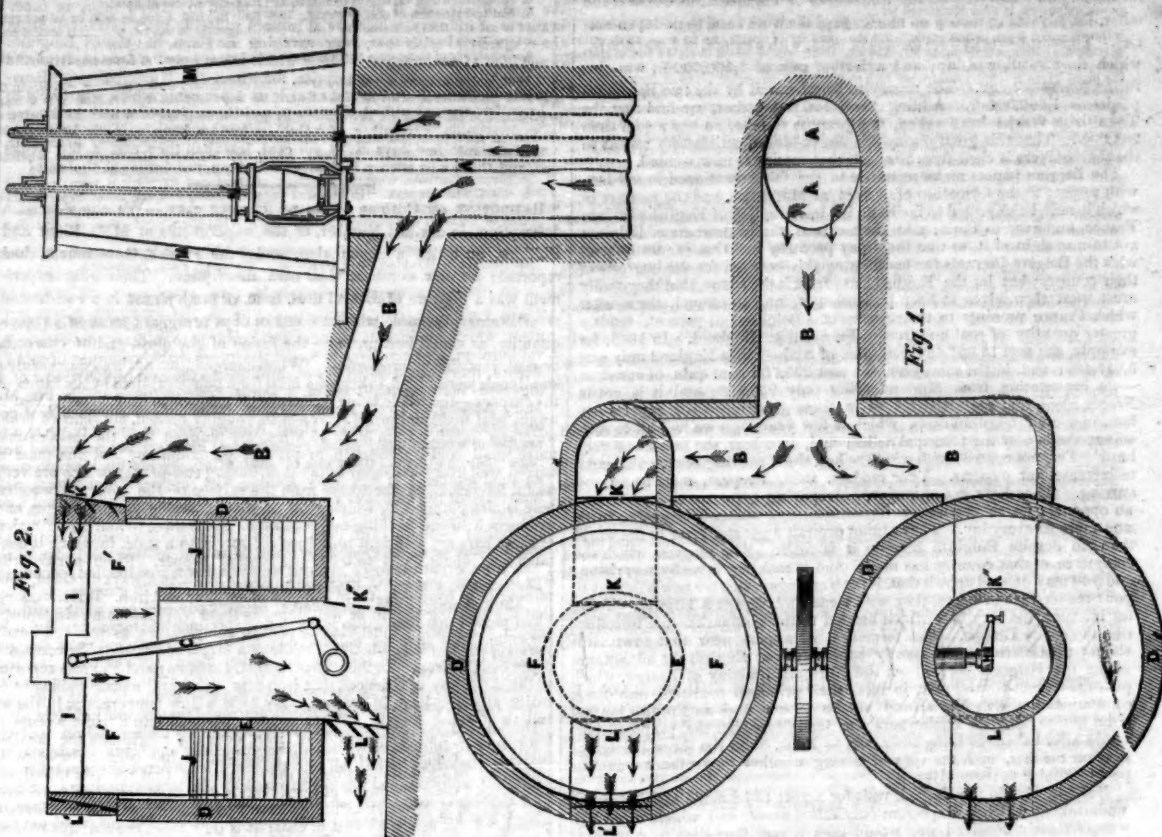


Fig. 1. For the last 18 months, a large portion of your valuable Journal has been devoted to giving publicity to the views and schemes of practical men and others, which have had for their object the improvement of the present system of ventilation.

This subject received some attention in the last session of Parliament; and I have read a paragraph in your Journal of the 27th November, stating that it is again to be revived at an early period of the present session. No one can doubt, therefore, that an improved system is much called for.

The object to be attained, appears to me, to be sufficient ventilation at all times. Mine are at present ventilated by means of furnaces, and this system is best applied when the furnace is placed at the bottom of the upcast pit, because the ascensive force of the upcast column will depend upon its length and temperature; and, therefore, its weight, as compared with the weight of a corresponding column of atmospheric air, pressing through the downcast pit. It is not necessary to enter into calculations, to prove what must be evident to every one—that the ascensive force of the up column will vary with the attention and care bestowed on the furnace, as well as with the thermometrical and barometrical changes in the atmosphere. These considerations have led me, in the course of my professional pursuits in mining, to endeavour to suggest a new improved system; and, as ventilation has always appeared to me to be a mechanical operation, my endeavour has been to produce, by mechanical means, a plan which should supersede the furnace, and, at the same time, take advantage of the important feature in a mechanical point of view—viz.: the area of the air-pit and air-channels of the mine, so as to pass the requisite ventilation (without the aid of pipes) with the least possible resistance, and without disturbing any of the underground arrangements—thus rendering the change of system easy and inexpensive.

In order to accomplish this, I convert the whole of the air passages, as well as the upcast pit, or so much of it as may be judged sufficient, into the suction pipe of my pumping apparatus. The description of pump which I have adopted consists of a gasometer, moving in water, which forms the hermetical seal for the air. The exterior cylinder may be constructed of masonry or wood-work, and the upper portions of light tin-plates, or planks, or frame-work, with glass. The apparatus is supplied with inlet and outlet valves, formed of tin-plate, or other light material, lined with leather, and so contrived as to prevent, when open, a sectional aperture through the pit. The upcast pit is closed up, and connected with the apparatus by tunnels, or tubing. This arrangement need not interfere with the pumping of water, or the raising of coal through the pit, as will appear by consulting the drawing. In the case of a pit through which the coal is raised, one simple mode of keeping it closed, and at the same time admitting of its being used for such a purpose, is represented in the drawing, Fig. 2. It is proposed to have moveable covers of the required size, N N, on the pit, through which the coal is raised. When the waggon rests upon the top of the pit, it will raise the cover, N; the platform on which the waggon rests will then supply the place of the moveable cover. When the waggon descends it will leave the cover, N, in its original position. In this manner the pit will be always closed, which will add greatly to the safety of the men on the top. This contrivance may be made still more perfect by fixing a tube of a few feet in depth, so that the platform shall enter under before it raises the cover. As regards pumping, the cover will be stationary, with the rod working through it. It will be perceived that this system does not interfere with any of the arrangements underground, but that it merely supersedes the furnace.

A current of air, moving at the rate of 10 miles per hour, would be equivalent to half-a-pound pressure per square foot. It may, therefore, be readily understood, that the power requisite to produce a strong current of air through the mine need not be great, and that tight joints are not indispensable; the pressure being slight, as the tabulated statement serves to demonstrate. Neither the barometrical nor thermometrical changes in the atmosphere can affect the operation of the apparatus. The quantity of air drawn through the mine can be ascertained with as much accuracy as the quantity of water raised by a pump. In case of obstruction in the air-ways, the machine would indicate the derangement to the engine-man by the increased pressure which would be produced upon the gasometers; and, in case of an explosion (very unlikely to take place with such a ventilation), the vast body of air which would still continue to traverse the workings, could not fail to clear the colliery of the noxious gases which succeed it, and afford a safe retreat to the men.

Another advantage derivable from the use of this machine, is that, by closing the down cast pit, which may either produce the power requisite, or, if it is set aside for an upcast pit, with the mine ventilator. Thus, an uninterrupted communication is established with the whole of the air passages and galleries of the mine. D and D, are cylinders or vessels, which may be constructed of masonry, wood, or iron, containing water, through which an elongation of the tunnel from the shaft is introduced. E, is the elongation which an elongation of the tunnel from the shaft is introduced. E, is the elongation which an elongation of the tunnel from the shaft is introduced.

A few hundred weights of coal will produce the power requisite, which may be derived from a high-pressure steam-engine, or from the engine of the colliery. The wages of the firemen and the costs of the furnace will be saved, and the damage to the pit chains, brattices, and iron-work in the pit, prevented; to say nothing of the relief to workmen and horses, ascending and descending, as they now do, through a current of vitiated air. The saving of expense in sinking pits for air will be very great; because two channels only are required, a downcast and an upcast pit, with which every mine must be provided.

Calculation of the Power required to work this Machine.

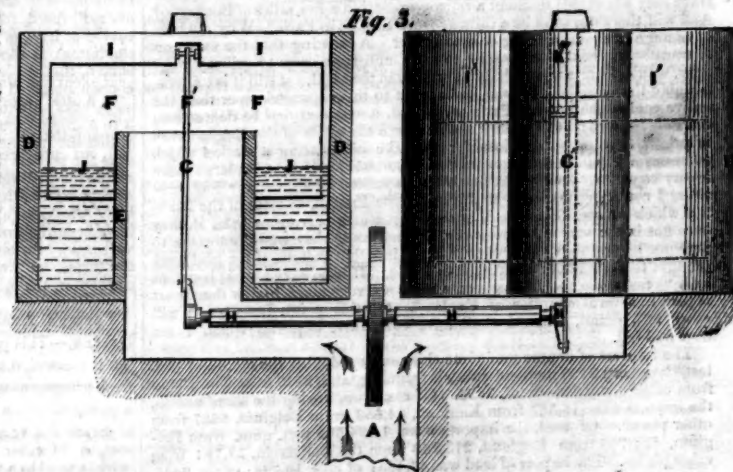
Diameter of piston in feet.	Cubic feet of air drawn through an opening of 60 superficial feet per minute.	Horse power.
5	7858	0.98
10	31,416	3
15	70,680	2.75
20	125,664	16

The power will diminish as the openings increase, in the inverse ratio of the squares of the areas of these openings; so that only half the above power would be required for an opening of double the area.

DESCRIPTION OF THE PLATE.

Figures 1, 2, 3, are a plan, section, and elevation of the mine ventilator. A, represents the upcast pit, which may be either the power requisite, or, if it is set aside for an upcast pit, with the mine ventilator. Thus, an uninterrupted communication is established with the whole of the air passages and galleries of the mine. D and D, are cylinders or vessels, which may be constructed of masonry, wood, or iron, containing water, through which an elongation of the tunnel from the shaft is introduced. E, is the elongation which an elongation of the tunnel from the shaft is introduced. E, is the elongation which an elongation of the tunnel from the shaft is introduced.

The operation of the machine is as follows: A steam-engine, or other power, gives a rotary motion to the shaft and cranks, H; and, by means of the connecting rods, G G, the gasometers, or hollow pistons, F F, ascend and descend alternately, so that one balances the other. When one ascends, the air from the mine goes into the inlet valves, K,



and fills the ascending gasometer, F. The other gasometer descends at the same time, and, therefore, the inlet valves, K, open and admit the air of the mine into the upper cylindrical chamber, L. Upon the reverse motion, the gasometer, F, ascends and fills with air from the mine through the inlet valves, K, and fills the ascending gasometer, F. The other gasometer descends at the same time, and, therefore, the inlet valves, K, open and admit the air of the mine into the upper cylindrical chamber, L. Upon the reverse motion, the gasometer, F, ascends and fills with air from the mine through the inlet valves, K, and fills the ascending gasometer, F. The other gasometer descends at the same time, and, therefore, the inlet valves, K, open and admit the air of the mine into the upper cylindrical chamber, L. Upon the reverse motion, the gasometer, F, ascends and fills with air from the mine through the inlet valves, K, and fills the ascending gasometer, F. 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a permanent lighthouse at a cost not exceeding the property lost in the two late shipwrecks—to say nothing of the awful sacrifice of human life constantly occurring, which would, to a great extent, be prevented.
Fleet-street, London, Dec. 9. G. SHEPHERD, C.E.

IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.

At a General Meeting of the Society, held at the London Tavern, on Monday, the 25th November, 1847.
ROBERT WILLIAM KENNARD, Esq. (Vice-President), in the chair.
It was resolved unanimously, That the following gentlemen be elected vice-presidents of the Society:—
WILLIAM BARROWS, Esq., of Bloomfield Iron-Works, Tipton.
WILLIAM BARNALL, Esq., of Goldhill Iron-Works, West Bromwich.
The meeting then proceeded to the ballot for the election of four additional pensioners, when the following votes were recorded:—
Deborah Tonks, four years a subscriber..... 1020 votes.
Charlotte Woolterton, one year a subscriber..... 955 „
Stephen Bloxwich..... 747 „
Ester Fryer..... 647 „
William Swap..... 510 „
Robert Pratt..... 331 „
William Williams..... 60 „
E. J. Bray..... 30 „
Whereupon the chairman declared Deborah Tonks to be elected to a pension of 20 guineas; Charlotte Woolterton to a pension of 14 guineas; Stephen Bloxwich, to a pension of 30 guineas; and Ester Fryer to a pension of 14 guineas.
The founder of the Society, H. L. Taylor, Esq., vice-president, then intimated his intention to exercise the privilege unanimously accorded to him at the last general meeting, by electing to the "Founders' Gift," Robert Pratt—whereupon the chairman declared Robert Pratt to be elected to a pension of 20 guineas.
Resolved unanimously, That the thanks of this meeting be presented to Messrs. Langley, V. Hurst, and Gregory, for their labours exertions as scrutineers.
Resolved unanimously, That the thanks of this meeting be presented to Mr. Thomas Hawkins, for the aid rendered by him to the Society, as honorary secretary.
Resolved, That the proceedings of this meeting be advertised, under the direction of the committee.
Resolved unanimously, That the cordial thanks of this meeting be presented to Robert William Kennard, Esq., vice-president, for his kind, able, and impartial discharge of the duties of chairman.
THOMAS HAWKINS, Hon. Sec.
67, Upper Thames-street, London, Dec. 6, 1847.

IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.—Notice is hereby given, that the FOURTH ELECTION OF PENSIONERS of the above SOCIETY will TAKE PLACE in the month of MAY next. The candidates must be deserving and necessitous persons—occupying, or having occupied, the station of master, traveller, clerk, warehouseman, shopman, fireman, or apprentice, in any branch of the iron, hardware, or metal trades, in any part of England; or the widows of such persons. The printed forms of application may be had of the undersigned, to whom they are to be returned, filled up with the required particulars, on or before the 7th of February next, after which day no application relating to this election can be received. Further information may be obtained on application to any of the members of the committee in town or country, or to
THOMAS HAWKINS, Hon. Sec.
67, Upper Thames-street, London, Dec. 6, 1847.

RAILWAY ACCIDENTS.—Messrs. BRETT & LITTLE are prepared to ATTACH their "MEANS OF COMMUNICATION between the GUARDS and ENGINE-DRIVER," on any line of railway: it will be in operation, in the course of a week, on the BRIGHTON LINE, and may also be SEEN, as well as their ELECTRIC TELEGRAPH, at their OFFICES, FURNIVAL'S INN, LONDON.

AYRESHIRE IRON COMPANY.—We understand that the directors have resolved to raise at once the necessary money for carrying on the company, and a large sum was subscribed on the spot for that purpose. It is expected that all the shareholders will enter into this arrangement; for if the company can obtain time, and avoid making a forced sacrifice of their property, the loss, if there be any loss at all, to all concerned will be but trifling.

THE ORRELL COAL MINES.—In the year 1792, the late John Clarke, Esq., banker, commenced working the Orrell Coal Mines under a lease from Meyrick Banks, Esq., Winstanley-hall, near Wigan, father of the present possessor. Up to that period the common coal only was used for household purposes; and on the introduction of the Orrell coal into Liverpool it was sold at a lower price than common coal, to induce housekeepers to make trial of it. Its superior durability, added to its pleasantness and cleanness in burning, soon gave it a most decided preference, even at a much advanced price. This preference it has since retained in Liverpool, and in the home and foreign markets it is considered equal to the best Wall's End coal, so much esteemed in London. It has also been proved to give out a greater quantity of gas, and make a better cinder or coke than any other coal in Lancashire, a further proof of its being the most durable and pleasant burning coal for parlour and kitchen use. The Orrell Mines have been for several years exhausted in the township of Orrell, but are still sufficiently plentiful in the adjoining township of Winstanley; as it was stated in the evidence before a Committee of the House of Commons, on the Liverpool, Bolton, and Bury Railway Company's Bill, that Meyrick Banks, Esq., had 1200 acres of the Orrell Mines on his estate, which he is working on an extensive scale, and it is calculated to yield 12,000,000 tons of coal, or 400 tons per day for 100 years. Within the last few years, other collieries have been started on the other side of Wigan, about three miles from the Orrell coal-field, and the coal, though called the best Wigan coal, is sold at a less price than the Orrell coal, thereby proving the superiority of the latter.—*Gore's Liverpool Advertiser.*

OPENING OF THE WERFA COLLIERY.—This colliery, which, from the quality of the coal, and the large extent of land which is to be worked, promises to be one of the most flourishing in the valley of Aberdare, was opened on Monday week. There is an incline plane from the pit's mouth, to the Aberdare Railway, which is admitted by competent persons to be admirably constructed for its intended purpose. We may add, that the lease of the property was first taken upon very favourable terms, by the Marquis of Bute, from William Thomas, Esq., of the Court, and has been relet by the noble marquis to Mr. Nixon—it is, we understand, now Messrs. Nixon and Williams'. The former gentleman is well known for his extensive knowledge of mineral property, and scientific abilities in underground surveys; and the construction of the pit, and its auxiliaries, reflects the highest credit upon his judgment and ingenuity. When in full work, it is supposed the pit will work about 200 tons daily.—*Monmouthshire Mercur.*

LITERARY NOTICE.

The Natural History of Creation, a Lecture, by EDWIN LANKESTER, Esq., M.D., delivered on behalf of the Young Men's Christian Association. London: Green, Paternoster-row.
In his preface, Mr. Lankester remarks, that he delivered this lecture extemporaneously, in which case it shows him a perfect master of his subject—it actually being, as it now appears in print, a popular elementary treatise on geology, describing the various strata, with their accompanying fossils, animal and vegetable. The language is flowing and easy, and well adapted for impressing on the minds of the young the great truths connected with this interesting subject.

NEW PATENTS.

S. Revington, Frant, Sussex, M.D., for improvements in dibbling and sowing seed.
J. Britten, Birmingham, machinist, for certain improvements in apparatus for cooking, preparing, and containing human food and drinks, and in opening and closing oven doors; parts of which improvements are applicable to other similar purposes.
J. E. Torpin, Edinburgh, newspaper proprietor, for improvements in printing signals.
W. J. Perkins, St. Paul's Church-yard, for improvements in cleaning or roasting coffee, in the apparatus and machinery to be used therein, and also in the apparatus for making infusions and decoctions of coffee. (Being a communication.)
J. S. Eiffe, Lombard-street, City, for certain improvements in the manufacture of astronomical and other clocks, chronometers, and watches.
J. Hacket, Leicester, for improvements in the manufacture of pill-boxes.
J. C. Robertson, Fleet-street, London, C.E., for certain improvements in the preparation and application of colours suitable for printing stuffs composed of silk or wool, or of a mixture of silk and wool. (Being a communication.)
J. Scofield, Upper Holloway, M.B., for improvements in the manufacture and refining of sugar.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 16 3—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Carr's Hartley 17 9—Davison's West Hartley 17 9—Hastings' Hartley 17 6 to 17 9—Hollywell Main 18 3—New Tanfield 16 6—North Perry Hartley 17 6—Ord's Red-hough 16 6—Original Tanfield 15 6—Original Pontop 16—Tanfield Moor 17 6—Tanfield Moor Butts 16 3—West Hartley 17 9—Wylam Main 16—Eden Main 20 6—Condon's Hartley 16 6—Blancgange Steam 22—Howard's West Hartley 17 6—Netherton 17 6—James and Andrew Stone 22—Old High Moor 18—Wall's End Aconr Close 19 9—Bell and Brown 19 9—Bewick and Co. 19 9—Clenell 19 9—Gosforth 19 9—Hotspar 20 6—Crawford's 18—East Hetton 19 6—Hawwell 21 3—Hetton 21—Keepler 20 9—Lambton 20 9—Lumley 19 9—Morton 20 6—Russell's Hetton 20 9—Shotton 20 6—Stewart's 21—Canadoc 20 9—Adelaide Toss 20 6—Denison 19—Stanton Durham 19 9—Tees 21—West Hetton 20—Ships at market, 17 3—sold 107; unsold, 65.

WEDNESDAY.—Adair's Main 16 6—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Carr's Hartley 17 9—Davison's West Hartley 17 9—Hastings' Hartley 17 6 to 17 9—Hollywell Main 18 3—New Tanfield 16 6—North Perry Hartley 17 6—Ord's Red-hough 16 6—Original Tanfield 15 6—Original Pontop 16—Tanfield Moor 17 6—Tanfield Moor Butts 16 3—West Hartley 17 9—Wylam Main 16—Eden Main 20 6—Condon's Hartley 16 6—Blancgange Steam 22—Howard's West Hartley 17 6—Netherton 17 6—James and Andrew Stone 22—Old High Moor 18—Wall's End Aconr Close 19 9—Bell and Brown 19 9—Bewick and Co. 19 9—Clenell 19 9—Gosforth 19 9—Hotspar 20 6—Crawford's 18—East Hetton 19 6—Hawwell 21 3—Hetton 21—Keepler 20 9—Lambton 20 9—Lumley 19 9—Morton 20 6—Russell's Hetton 20 9—Shotton 20 6—Stewart's 21—Canadoc 20 9—Adelaide Toss 20 6—Denison 19—Stanton Durham 19 9—Tees 21—West Hetton 20—Ships at market, 17 3—sold 107; unsold, 65.

FRIDAY.—Buddle's West Hartley 17 6—Davison's West Hartley 17 9—Hastings' Hartley 17 6 to 17 9—Hollywell Main 18 3—New Tanfield 16 6—North Perry Hartley 17 6—Ord's Red-hough 16 6—Original Tanfield 15 6—Original Pontop 16—Tanfield Moor 17 6—Tanfield Moor Butts 16 3—West Hartley 17 9—Wylam Main 16—Eden Main 20 6—Condon's Hartley 16 6—Blancgange Steam 22—Howard's West Hartley 17 6—Netherton 17 6—James and Andrew Stone 22—Old High Moor 18—Wall's End Aconr Close 19 9—Bell and Brown 19 9—Bewick and Co. 19 9—Clenell 19 9—Gosforth 19 9—Hotspar 20 6—Crawford's 18—East Hetton 19 6—Hawwell 21 3—Hetton 21—Keepler 20 9—Lambton 20 9—Lumley 19 9—Morton 20 6—Russell's Hetton 20 9—Shotton 20 6—Stewart's 21—Canadoc 20 9—Adelaide Toss 20 6—Denison 19—Stanton Durham 19 9—Tees 21—West Hetton 20—Ships at market, 17 3—sold 107; unsold, 65.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.

The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS ON DEBENTURES, in sums of not less than £500, for three or five years—bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.
Tenders to be addressed to this office. Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.
By order of the directors, D. RANKINE, Treasurer.
Caledonian Railway Office, 122, Princess-street, Edinburgh, March 26, 1847.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY.

FURTHER CALL OF FIVE POUNDS PER SHARE.—The directors having made a further CALL of FIVE POUNDS per share upon the respective shareholders in this undertaking, PAYABLE on the 30th day of December now next, Notice is hereby given, that the shareholders are required to pay such call on the said 30th day of December now next, to the persons and at the places hereinafter named, or some or one of them (that is to say):—
To the Birmingham Banking Company, at their bank in Birmingham.
To Messrs. Attwoods, Spooner, and Co., at their bank in Birmingham.
To Messrs. Jones Loyd and Co., at their bank in Lombard-street, London.
To Messrs. Spence, Attwood, and Co., at their bank in Gracechurch-street, London.
To Messrs. Moss and Co., at their bank in Liverpool.
And, in default of payment being so made, the shareholders making such default will be charged interest, at the rate of 5 per cent. per annum, from the last-mentioned date, until the call is actually paid.
A circular will be sent to each shareholder, which must be deposited at the bankers', when the call is paid.
By order of the board of directors,
34, Bennett's-hill, Birmingham, Nov. 10, 1847. JOHN W. KIRSHAW, Sec.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY. TO THE DIRECTORS OF THE BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY.

WE, the undersigned, being shareholders in the Birmingham and Oxford Junction Railway Company, holding in the aggregate more than five thousand shares (that is to say, more than one-tenth part of the capital), therein do by this writing under our hands require you forthwith, on the receipt hereof, to call an EXTRAORDINARY GENERAL MEETING of the shareholders of the said company, for the following objects or purposes, that is to say, for the purpose of considering the subject of an action lately commenced against the said company, by Messieurs Samuel Morton Peto and William Esdaile, and also the several actions which have been commenced in the name of the said company against various shareholders therein, for enforcing payment of a call made, or purporting to have been made, on the twelfth day of June, one thousand eight hundred and forty-seven; and for the purpose of considering and determining upon and giving such directions as may be thought fit, as to the course to be adopted by the said company with reference to such actions respectively, and the subjects thereof respectively, and of considering the propriety of appointing, and if so thought fit of appointing, under the common seal of the said company or otherwise, and directing the employment of an attorney and solicitor, or attorneys and solicitors of the said company, to act on behalf of the said company generally and in all matters or on such particular matters, and for such period, and either exclusively or otherwise, as the said meeting shall think fit; and resolve, and also to consider the propriety of removing, and if thought proper to remove, or discontinue the employment of any person or persons who have, or has, acted as attorneys or solicitors, or as attorney or solicitor of the said company, and giving such directions, and making such orders as the said meeting may deem expedient in reference to, or consequential upon, any such appointment, employment, or removal, or other matters aforesaid, or any of them; and also to take into consideration, and to determine whether any, and if any, what measures should be taken as to soliciting, prosecuting, supporting, or opposing any bills or bills, or other proceedings before Parliament on the behalf, or in the name, of the said company; and as to taking, prosecuting, discontinuing, withdrawing, or abandoning, any notices or other proceedings which have been, or may be, given or taken with reference to any such bills or bill, or other proceedings in Parliament, and giving all such directions as to such meeting may seem proper in reference to any such matters.—Witness our hands, this 5th day of November, 1847.

Eliza J. Mozley Aubrey Alexander Hoghton
John Sanderson
D. H. Morley Christopher Bird Jones
Edwin Cropper Thomas Booth
William Reynolds, Jun. Charles Wilson
Robert Bickersteth Robert Jones
William Hall James Ryley
Lewin Mozley Hardman Earle
Thomas Arthur Hope Edward Tootal
Thomas Goodier Samuel Brooks
Charles Henry Abalom Watkin
Josiah Jones W. John Beale
Henry Tootal Abel Peyton
Samuel Beale T. R. Cobb
Harman Grisewood
John Edward Phillips

The requisition above set forth having been presented to the directors of the Birmingham and Oxford Junction Railway Company, Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the said company will be HELD at Dea's Royal Hotel, in Birmingham, on Tuesday, the 28th day of December next, at half-past Two o'clock in the afternoon.
P. H. MUNTZ, Chairman.
JOHN W. KIRSHAW, Secretary.
34, Bennett's-hill, Birmingham, November 27, 1847.

ELECTRIC TELEGRAPH COMPANY, LONDON, 34, STRAND, September 1, 1847. COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM OF TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, have so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.
STATIONS WILL BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES AND DISPATCHES WILL BE FORWARDED TO, AND RECEIVED FROM, all the OTHER STATIONS OF THE ELECTRIC TELEGRAPH COMPANY.
In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance:

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS OF THE COUNTRY will be CONCENTRATED, and FORWARDED IN EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.
The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT OF ENTRANCE to ALL the SUBSCRIPTION ROOMS OF the COMPANY—including the Central Station at London.
The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.
Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—
London Chester Southampton Derby Darlington
Margate Liverpool Winchester Nottingham Newcastle
Ramsgate Rotherham Dorchester Lincoln Berwick
Deal Barmsey Bristol Chesterfield Glasgow
Dover Wakefield Gloucester Edinburgh
Folkestone Leeds Bradford Scarborough
Canterbury Halifax Peterborough Wisbeach Bridlington
Northampton Rochdale Yarmouth Lowestoft Stamford
Coventry Hull Huntingdon Cambridge Norwich
Birmingham Maidstone Hertford Chelmsford St. Ives
Wolverhampton Tonbridge Manchester Ipswich Wars
Stafford Gosport Leicester Colchester
J. LEWIS RICARDO, Chairman.

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.

Persons of all ages, and in every station, may assure with this society on very moderate terms. No extra premium is required for sea-risk, or residence in any part of Europe. Persons wishing to visit, or reside in, other parts of the world, may also effect policies at a small increase of premium.
BONUSES.
The two first divisions averaged £23 per cent. on the premiums paid; the third, 25 per cent. The fourth bonus, declared January, 1847, averaged rather more than 23 per cent.; and from the large amount of profits reserved for future appropriation and other causes, the bonuses hereafter are expected to exceed that amount.
Tables of rates, with the last full report, can be obtained of the society's agents, or by addressing a letter to
GEO. H. PINCKARD, Resident Secretary.
No. 99, Great Russell-street, Bloomsbury, London.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY, 36, CORNHILL, LONDON.

Capital £500,000, empowered by Act of Parliament.
This institution embraces important and substantial advantages with respect to Life Assurance and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessities.
Assurances for terms of years are granted on the lowest possible rates.
DIVISION OF PROFITS.
The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
£1000	£10	1847	£217 15 1	£109 0 11	£16 0 4	£445 0 0
		1848	192 3 0	87 1 4	13 10 2	395 11 1
		1849	165 11 10	74 1 9	11 3 1	346 2 3
		1840	116 7 6	54 0 10	7 10 10	296 13 3
		1841	111 6 8	49 10 0	7 10 4	247 4 6

The division of profits is annual, and the next will be made in December of the present year.
F. FERGUSON CAMBOUX, Secretary.

FULLER AND DE BERGUE'S VULCANIZED INDIA-RUBBER BUFFERS AND BEARING SPRINGS FOR RAILWAY CARRIAGES.

The PATENTEES of this NEW and IMPORTANT INVENTION beg to announce in Engineers, Carriage-builders, and Railway Companies (especially those constructing new lines), that they have now completed their arrangements for SUPPLYING the VULCANIZED INDIA-RUBBER BUFFERS and DRAW-SPRINGS, for Passenger-Carriages, Waggon, Cattle-Carriages, Engines, Tenders, &c., and are prepared to execute Orders TO ANY EXTENT.
On several of the principal Lines these Buffers have now been tried for many months past, under very able superintendence, and with decided success. The patentees, therefore, feel justified in stating, that they are prepared to furnish not only a more efficient Buffer than any hitherto in use, but on terms which will effect a considerable saving to Companies in the first outlay.
Specimens of the various kinds of buffers and draw-springs may be seen, and prices obtained, on application at their offices, No. 9, Arthur-street West, London-bridge, or at their depot, No. 2, David-street, Manchester.
The patentees will also be happy to furnish full information to all communications by letter, together with drawings of the best mode of application.—The attention of Locomotive Engineers is particularly invited to their BEARING SPRINGS for ENGINES and TENDERS, the recent trials of which have proved most successful.

TO ENGINEERS AND BOILER-MAKERS. LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS, TUBES FOR STEAM, GAS, AND OTHER PURPOSES, ALL SORTS OF GAS FITTINGS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY, 49, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE. MANUFACTURE BOILER AND GAS TUBES, under an exclusive License from Mr. B. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM. WORKS—SMETHWICK, STAFFORDSHIRE. LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.
TO ENGINEERS, RAILWAY, AND STEAM-BOAT COMPANIES, AND THE PROPRIETORS OF STEAM-ENGINES GENERALLY. BENJAMIN GOODFELLOW, THE PATENTEE OF THE COMPOUND ACTING AND SELF-ADJUSTING METALLIC PISTONS.

Desires to solicit the attention of the above parties to the said improvement; the peculiar advantages of which are, that they are particularly sensitive to any variation in the size of the cylinder, and will accommodate themselves to an oval, with a constant tendency to wear it cylindrical. The Junk-ring, or cover, is brought down upon the head of the piston, securely and truly, leaving the packing perfectly at liberty between the plates—against which the spring presses the outside rings or casing, as well as to the surface of the cylinder, thereby preventing the escape of steam either past or into the piston—at the same time the friction being the least possible.
As there are many, no doubt, still unacquainted with the existence of his pistons, and the same being liable to be imposed upon by parties making and vending in imitation (but with slight variation in form), he takes this opportunity of cautioning them—it being susceptible of many modifications, the simplest and most efficient of which may be seen is the subject of his patent.

The patentee has twice established his exclusive right to the principle of construction of his improved metallic pistons—once in an action "Goodfellow v. Barker," tried on the 11th February, 1846, in the Court of Exchequer, before the Chief Baron and a special jury, when a verdict was found for the plaintiff. In this case the defendant's infringement was a helical or spiral formed spring—thus: around which was placed a metallic casing, to which it gave a compound, or vertical, and lateral pressure, an arrangement which was proved, in both trials, never to have existed before the plaintiff's patent.
A similar result attended a former action, "Goodfellow v. Swindlehurst," tried at the assizes at Liverpool, in March, 1845; the infringement of which was a series of wedge-form segments, acted upon by a flat-spring, thereby producing the compound action.

And, as a proof of the clearness of his established right to the said improvements, the juries in both cases, after long and well contested trials, were not three minutes in finding verdicts for the plaintiff.
B. G. begs to say, that he is prepared to manufacture any size of metallic pistons, or buckets, on the shortest notice; and has, at present, all sizes at work, up to 88 inches diameter, and air-pump buckets up to 48—specimens of which may be seen, and any particulars had, at his works, Hyde, near Manchester. He can re-bore the cylinders for the same (when required), without removing them from their places, and will guarantee that all shall be of the best material and workmanship, and engages to give every satisfaction to parties who may favour him with their orders.
There are now upwards of one thousand four hundred of them at work, and principally at very large and respectable firms—a list of which may be had on application, as above.

FROST, NOAKES, & VINCENT (originally JAMES FROST),—ESTABLISHED 1818, BRASS AND COCK FOUNDERS, No. 198, BRICK-LANE, WHITECHAPEL, LONDON.

Beg most respectfully to call the attention of ENGINEERS, and those PARTIES EMPLOYING the AID of STEAM, &c., to their highly IMPROVED STEAM COCKS, WATER INDICATORS, SAFETY VALVES, and their newly-invented SELF-ACTING HYDROSTATIC BALANCE, for feeding high and low-pressure steam-boilers.
F. N. & V., having, for a very long period, made it their particular study to prevent the annoyance of leakages and waste, so frequently complained of, can, with confidence, recommend the above articles as superior to any hitherto produced, and at moderate charges.
DOUBLE FLANGE COCKS, of all sizes, in stock.
COCKS, from 1 to 16 ways.
STEAM COCKS, screwed to suit the patent wrought iron tube, from 1-inch to 2-inch.

Every other DESCRIPTION of BRASS WORK used in STEAM APPARATUS, &c. Brewers, distillers, and others supplied.
Work made to Drawings.
N.B.—The original inventors of the above patented STEAM COCK.

HENRY BAKER begs to call the attention of Engineers and Proprietors of Steam-Engines, to his NEWLY-IMPROVED STEAM-GAUGE, which shows the PRESSURE and TEMPERATURE of the STEAM, as seen in the drawing annexed. It is an ornament to the engine-room, and supercedes the ordinary mercurial gauge in these respects, by not being so cumbersome—much cheaper, and warranted accurate.

Boiler explosions, in many instances, occur through steam-gauges not being in good working order; therefore, every attention should be paid to these very necessary adjuncts.
HENRY BAKER'S STEAM-GAUGES may be FIXED in a COUNTING-HOUSE, and will SHOW the PRESSURE the same as if fixed in an engine-room—thereby having a check on the person working the engine.
Price.....£3 2s.
VACUUM-GAUGES, in brass frames, showing the barometric scale, from 22 inches to 30 inches.—Price, £3 3s.
Ditto ditto, in mahogany, very elegant, showing the barometric scale in full.—Price, £3 3s.

HENRY BAKER, BAROMETER, THERMOMETER, & STEAM INSTRUMENT MANUFACTURER, 90, HATTON-GARDEN, LONDON.

IMPROVED LIFTING JACKS, MANUFACTURED BY W. AND J. GALLOWAY, PATENT RIVET WORKS, MANCHESTER.

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